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July 2008 Volume 21 Number 07 Free

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Editorial

In the last issue, I spit some relatively mild-mannered vitriol in the direction of a certain insurance company and a certain group of people who saw their way clear to pinch our car. With all our stuff in it. In broad daylight. At a karaoke event for Japanese seniors (don't ask).

I'm happy to report that some of the stuff our rolling weekend home contained was still in the car when it was recovered, albeit a little worse for wear given that the car sat in impound for two weeks with the windows open. I didn't hold out a lot of hope for the laptop and guitar that were in the trunk and, sure enough, they were both gone.

Last month, we also talked about the cloud computing concept — the one that sees all your data stored online, accessible from any PC with an Internet connection. The loss of the Eee PC definitely hurt, but it didn't put too much of a dent in my productivity since everything I needed was still stored online, available from any computer I use, anywhere.

Prior to all that, in our May 2008 issue I mentioned how easy doing a full factory default restore on the Eee PC can be; it took less than five minutes in my tests and didn't require any restore CDs, bootable discs or otherwise.

Now, in preparing to sell a Sony VAIO laptop purchased during a Boxing Day sale, one that (we now realize) is simply too heavy for my partner to cart around town, I'm struck with a contrast.

Here I sit, after getting home from the office about five hours ago, and I'm still waiting for the VAIO to finally be reset to factory default settings as the Craigslist ad I posted promised it would be.

As any competent computer user will tell you, it's not just a good idea to wipe the hard drive(s) of any computer you're selling or giving away, it should be considered mandatory. To my surprise, the VAIO in question (I can't speak for others in the line) includes a hard disk wiping utility specifically designed to be used when selling or donating the computer after you're done with it. So, that counts for about an hour and a half out of my night; waiting while the drive is wiped clean, written over with random data and wiped again. But what of the other three and a half hours? I burned the important data from the computer; less than one CD's worth: perhaps another half an hour. I watched the Windows Vista Home Ultimate initial install — not too painful but still a bit drawn out: I can't give exact timing but it was less than an hour.

That leaves two hours. Two hours and Vista's prettier-than-XP progress bar is at 68 per cent. There's a dialogue box letting me know that it is now "Installing the requested software." It kindly informs me that "This may take several moments." A couple of problems with these statements: I didn't request any software and I'm not sure what is classified as a "moment," but two hours sounds like more than several of them.

And it's not even done yet.

In fact, judging by the barbiturate-addicted snail's pace at which the progress bar is moving, it's not even close.

The problem is one that plagues many PCs. While it may be tempting to point the gnarled finger of blame at Windows Vista, that's not entirely fair. Sure, the Vista initial install took a while and, granted, it makes this reasonably balanced machine perform sluggishly unless every bit of graphical flair is turned off. However, the bulk of the problem lies with the bloat and, dare I say, crapware that's bundled with the restore discs.

Discs, I must point out, I had to burn myself as none are included in the majority of retail PCs these days. Subtract another half an hour from the total for burning restore DVDs and we're sitting at one and a half hours for the machine to install gigabytes worth of stuff I didn't want in the first place.

Hopefully, the buyer of our once-loyal PC will feel differently.

Things like Corel Snapfire, SonicStage Mastering Studio, Norton Internet Security 2007 with spyware protection (one of a host of time- or feature-limited software packages you have little choice but to accept), a trial edition of Microsoft Office 2007 and more. Much more than the average PC user bargained for, I'd guess.

Perhaps some users will be happy to get a bundle of free (but mostly trial) software already loaded up and ready to go.

Perhaps many PC users don't care to research the best software solutions to meet their unique computing needs after purchase and are happy to have the shovelware included.

Perhaps laptop manufacturers really have the consumer pulse and so, can decide which programs they'll need on their new laptops. Then again, perhaps consumers have just gotten used to accepting the bloat that far too often comes with a new laptop or desktop PC; Sony is far from being the only company guilty of bundling software and "utilities" that customers may or may not want. Perhaps those companies believe that doing so adds to the perceived value of a new computer.

Now it's 1 a.m., I've been home for five and a half hours and we're rocking 74 per cent on the progress bar and I'm about ready to give up hope. It is a stark contrast to the hour-long XP installs of days gone by... to say nothing of the simple wipe and restore process that got me back in the data cloud within five minutes with the Eee PC.

Yours in insomnia,
Andrew Moore-Crispin

P.S. Enjoy the issue.

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The Feed
from www.hubcanada.com

Featured Articles:

Little Geeks Connects Kids to Computers and the 'Net
By Dorian Nicholson
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Toronto-Based Artist Featured as Zune Original
By Dorian Nicholson
In an effort to keep their line of media players unique, the people at Zune have decided to give their customers the ability to customize the external look of the devices from the colour of the player's surface to an option to have laser-engraved artwork on the back through the Zune Originals program.
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Hydrogen Generators for Under $300? It is Possible...
By Dorian Nicholson
The gas crisis is looming, prices are skyrocketing, and motorists are looking for alternative transportation — or at least ways to reduce the cost of commuting. One way is by installing a hydrogen generator into an average automobile, allowing the user to save up to a third of their gas.
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Nanotechnology – The Slick Picker Upper
By Mia Evans
A mat of nanowires could become the next big thing in the cleanup of oil and other organic pollutants. MIT researchers and colleagues announced in the May 30 online issue of Nature Nanotechnology that they have created a membrane which can absorb up to 20 times its weight in oil, while remaining completely impervious to water.
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Breaking News:

Fido Also Takes a Bite Out of iPhone
By Harry Powell
Canada's fourth largest wireless provider and number one in wireless customer satisfaction, Fido, just announced it will also offer the much-hyped iPhone 3G to Canadians when the device launches on July 11.
www.hubcanada.com/feed/235

Aeroplan Music Store Becomes First in Canada to Sell Just MP3s
By Dorian Nicholson
Canada now has a new way of getting its music online — and legally too. The Aeroplan Music Store recently announced that it would become the first Canadian online music retailer to sell only MP3 files from Canada's four biggest record companies: EMI, Universal, Sony BMG Music, and Warner Music Canada.
www.hubcanada.com/feed/230

Yahoo Canada Redesigns, Goes Foxy
By Harry Powell
Not to be outdone by the Canadian Internet music scene (it's huge you know) Yahoo Canada announced a major redesign of its music site which will allegedly give Canadians access to music videos, streaming radio, concerts, music news, blogs, and now lyrics — so now you can find out what the heck your favorite band is talking about.
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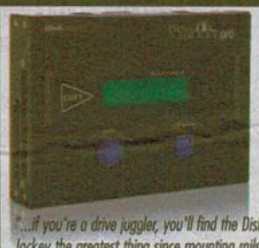

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The Doctor is in

Here's your chance to send your PC woes to our resident Techspert, the HUB PC Doctor

Dear HUB PC Doctor:
My question is how do I check for spyware?
Thanking you in advance.
Helene C

Hi Helene,
Before you begin scanning for and removing spyware or viruses you should ensure you have a backup of your data (on CD/DVD/USB drive).
The software I recommend to scan for and remove spyware (all free):

Online Scanner:
Trend Micro HouseCall - Performs an online scan of your system to determine if your computer is infected by spyware or viruses. Available at: http://housecall.trendmicro.com/

Spyware Scanning and Removal:
Spybot Search and Destroy - A spyware scanner and removal utility. Available at: www.safer-networking.org/en/index.html

SUPERAntiSpyware Free - The free version will scan and remove spyware that is infecting your computer: www.superantispyware.com/

Lavasoft Ad-Aware 2008 Free - A spyware detection and removal utility. Available at www.lavasoft.com

Microsoft Windows Defender - A spyware and malicious software detection and removal utility. This utility provides real-time protection which means it will detect spyware as it is accessed on your computer or the Internet. Available at: www.microsoft.com/athome/security/spyware/software/default.mspx

Anti-Virus
AVG Free - An anti-virus scanner. Get this if you don't have any anti-virus software already installed. Available at: http://free.grisoft.com/

There are some things you can do to reduce the chance of your computer becoming infected with spyware:

Make sure you have installed the latest Windows Updates by visiting Microsoft Windows Update regularly or turning Automatic Updates on in Windows

Use Mozilla Firefox or Opera as your web browser instead of Microsoft Internet Explorer.

Don't use P2P file sharing networks unless the file being downloaded is being shared legally and the link to the software is hosted on or linked from the creator's website (e.g. open source software such as a Linux distribution, shared via BitTorrent).
Don't open email attachments unless you are expecting them.

Dear HUB PC Doctor:
I have been getting radio stations on my computer speakers which means, of course, that I can't play CDs through my computer. Do you have any idea how I can stop this very unwelcome sound?
Thank you,
Barbara S

Hi Barbara,
The most likely cause of this interference is because the speakers that are being used aren't shielded. Speakers are prone to radio frequency interference and electromagnetic interference and without shielding they will transmit that interference. Also any cabling leading to the speaker can act like an antenna. There are a couple things you can try to stop this interference:

Move the speakers and wiring for the speakers, an adjustment of a few feet may help.

Move the location of the computer and speakers to another room, or another part of the room it is currently in.

Loop the excess length of speaker wire and tie it with twist ties or zip ties — the looped cable should act less like an antenna.

Purchase a set of shielded speakers or a better set of speakers from a store with a liberal return policy (in the event that you are still getting interference you can return them).

For extreme cases of interference you can do an online search for ferrite rings and purchase a few of those. When your audio wires, including any wires supplying power, are wrapped around them (5-15 times per wire, closest to the speaker) the ferrite ring should filter out any radio frequency interference.

Dear HUB PC Doctor:
I am a senior and enjoy my computer tremendously. But lately I am having trouble getting into my stuff. Recently I had my files updated by my son-in-law and I must say that it worked OK for a while. But at one time I had a program that would scan a lot of items and repair them. Could you assist me in getting it back? I do defragment my drives on a regular basis and have plenty of space at this time, yet when accessing "My Computer" it takes so very long. This retired mailman would be ever so grateful if you could assist me somewhat.
Cor T

Hi Cor,
Without knowing exactly what was done to your computer it is difficult to determine what could be causing your computer to run slowly. If your son-in-law updated your computer from one Operating System to another, perhaps from Windows XP to Windows Vista, you may need more Random Access Memory (RAM) in your computer. You can determine what version of Windows you are running, and how much RAM you have by right clicking on My Computer and selecting properties. If you have less than 2 gigabytes of RAM in your computer Vista isn't going to perform very well, Windows XP should run fine with 1 gigabyte. Fortunately RAM isn't very expensive and it is reasonably easy to install. Perhaps your son-in-law can help with that. If not you can take your computer to almost any store that sells computers to have the update done. Service should not cost more than $30 for this type of installation as it should only take 5-10 minutes.

There are several utilities that offer an ability to fix issues with one click, the one that I'd recommend is:

Glary Utilities which is available here: http://www.glaryutilities.com/gu.html?tag=download

As always when using any repair utility please ensure you have backed up all important data to some form of external storage prior to running the utility.

Simon Bolduc is the HUB PC Doctor. He can be reached at pcdoc@ppublishing.ca

Canning the Canned Mashup

Intel Mash Maker: Will it blend?

The mashup is an established online phenomenon. Take the data from one source, mash it with the data from another and create a new way for users to interact with it. But here's the rub: the dividing line between "users" and "creators" is clearly drawn.

Creators create, users use

Mashups like the venerable HousingMaps (www.housingmaps.com) that takes Craigslist (www.craigslist.org) rental listings for major cities allows users to filter by location, cost and keyword, and then plots the results on a Google Map. The product is a much more user-friendly interface for Craigslist data. Distance mapping — from school or work, major attractions, highways and the like — is all user-driven; looking at the map, you determine where the abode is in relation to where your personal map push pins would go.

If you are an advanced user and know your way around code, you could perhaps upgrade HousingMaps data to include "what's nearby" to look for schools, pizza, sushi, libraries or anything else Google keeps track of. Or, you could start from scratch and create your own HousingMaps-style mashup. That's not for most users though.

Dividing lines

Intel is blurring the dividing line between content creators and users. By making a more user-friendly interface for creating mashups with Intel Mash Maker, the door is swung wide open
for users with ideas but without the coding know-how to create and share new mashups.

"Mash Maker is targeted at end users across the spectrum of capabilities," says Jeff Klaus, marketing director for Intel Mash Maker. In less marketing speak, that means anyone from novice to techspert can contribute to the Mash Maker community. Mash Maker was created "for users that are opening up three, four, five browser windows or tabs to complete a task," Klaus says. Anyone that's ever mapped an apartment or real estate listing and maintained an online chat about said listing while taking notes can appreciate that logic. Mash Maker takes the various services that are available online and allows users to create their own interface to that service.

A prime example from the current top-down model of web publishing: Expedia.ca offers a portal for users to collect numerous airfares, hotel and car rental deals in one place. In addition to prices, departure dates and times, Expedia tells you the type of aircraft you'll be flying in if you book. If you're a power flyer, you've probably taken the carrier and plane info and plugged that data into SeatGuru.com to check which seat in cattle class is your best bet. Mash Maker consolidates this and other user selected info from across the web and puts it all in one place — on the page you're visiting.

Breaking down the top-down

"I'd normally have to rely on Expedia to change their site and incorporate that information," says Robert Ennals, senior researcher at Intel Research Berkeley and Intel Mash Maker Architect. Ennals is also the man responsible for creating the Firefox browser plugin that makes Mash Maker run smoothly.

What Mash Maker enables end users to do is to take information like that found on SeatGuru.com and cross-reference it with the information for flights being shown on Expedia without switching browser tabs or opening new windows. The leg room information appears right below the airline info, affording at-a-glance access to information that would otherwise require cross-tab copy/pasting and flipping between numerous sites before rendering a decision on which flight to book. You could also pop up a calendar Widget if you're browsing for flight data as opposed to booking solid travel dates. Other Widgets (such as maps or notepads) can be positioned around the page and can actually shift site data as opposed to covering it up. Once you've found a Widget configuration that works, you can take the Widgets in place and save the page so it will appear just the way you like it on subsequent visits.

Who's in charge here?

The Mash Maker concept is very user driven says Ennals. "In order for a Widget to work with a page, it needs to understand it," he says. And in addition to the algorithms that autonomously extract data from sites, "any user can open this extraction editor and give Mash Maker information." Information such as what a data field means (e.g. a telephone number with area code, an IP address, a street address, a seat number, an apartment or suite number and so on) is fed to Mash Maker by end users. Simple and easily understood data like a date or phone number doesn't require any intervention, but less commonly occurring details like the aforementioned airplane seat number will — at least at first. As the user base continues to feed Mash Maker data, it will continue to grow and its educated guesses as to how to deal with data on a page will become more educated and less like guesses.

Webmasters, get prepped

For webmasters, making your site Mash Maker ready is a simple affair. Mash Maker is a "site agnostic" application, Ennals says. "A site doesn't have to do anything to be Mash Maker ready," says Klaus, except allow Mash Maker to categorize the info the site contains. Rather than passively waiting for their site to be mashed though, Webmasters can help Mash Maker along by categorizing the info on their site using the Extractor Editor and can make Widget suggestions for Mash Maker users who visit their site.

A community in the making

The community started in closed beta testing with 8,000 users, Klaus says. However, at the kick off of the Web 2.0 Expo in San Francisco (www.web2expo.com), Intel officially put the free betas public, available for both Internet Explorer (version 7) and Firefox with support up to version 3.x on Windows and 1.x on Mac OSX. Beta accounts are available on the Intel Mash Maker site (http://mashmaker.intel.com)

By Andrew Moore-Crispin

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CP1515n (lan/colour/12ppm/600 dpi) ... 372.95
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R1400 Wide Photo/DVD/CD Printer 273.95
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- ✓ Great for backing up notebooks

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Notebooks - Notebooks - Notebooks

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Featuring nVidia's 9500GS 512mb Video Controller

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Model#AS-M50SV-A1

Built-In Adjustable Webcam

Asus 2kg Powerful Ultralite
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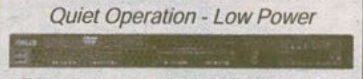
SERVERS

Rackmount 2U *Core2Duo™*
Server with 320GB Storage

Package as listed **$689.00** #Q61133

- ✓ Intel Core2Duo e4400
- ✓ 1GB DDR2 ECC memory
- ✓ Intel *server* motherboard
- ✓ Twin 160gb Seagate drives
- ✓ 4 x 3.5" & 1 x 5.25" bays
- ✓ Built-in Gigabit networking
- ✓ CD-ROM & Floppy drives
- ✓ Intel onboard RAID 0/1/5/10
- ✓ Two year warranty

Rackmount 1U *RAID-1*
Quiet Operation - Low Power



This new 1U rackmount server features twin 160GB drives in a Adaptec controlled RAID 1 array for security. Ideal for hosting websites, as a mail server, etc.

- ✓ Intel Pentium-D Dual Core 2.0Ghz processor
- ✓ Quiet Heatpipe cooling system
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- ✓ Onboard HD graphics
- ✓ PCI-Express expansion slot
- ✓ Built-in DVD/CD writer drive
- ✓ Dual Gigabit networking ports
- ✓ 4 USB 2.0 ports, 2 PS2 ports
- ✓ Two year warranty

Package as listed (#Q64062) **$759.00**

Rackmount 2U *Core2Duo™*
Server with 960GB Storage

- ✓ Intel Core2Duo e6600
- ✓ 2GB DDR2 ECC memory
- ✓ Intel *server* motherboard
- ✓ Three 320gb Seagate drives
- ✓ 4 x 3.5" & 1 x 5.25" bays
- ✓ Built-in Gigabit networking
- ✓ DVDRW & Floppy drive
- ✓ Intel onboard RAID 0/1/5/10
- ✓ Two year warranty

Package as listed **$949.00** #Q61327

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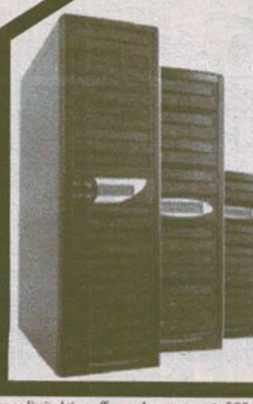
Push a button and make upto 11 copies of a DVD or CD automatically. Top quality Athena controller allows writing at upto 18x on DVD media.



- ✓ Full self-contained design
- ✓ Uses Pioneer 115 drives
- ✓ Upto 20x DVD burning
- ✓ 64mb built-in cache
- ✓ Supports dual layer
- ✓ One year warranty

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(Search for "FreeAgent" on our website)

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- ✓ 8.9" wide screen display
- ✓ Only 2.18lbs with battery!
- ✓ 4gb solid state hard drive
- ✓ 8gb extra storage SD card
- ✓ 1024mb DDR2 memory
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- ✓ External video port
- ✓ Includes Windows XP Home, Microsoft Works and Live

$579.95

FUJITSU Network Document Storage System

This Fujitsu compact professional document scanning and processing solution is designed for large offices who need to create and store their documents securely and electronically. Just one unit can handle upto 32 separate users reducing capital equipment costs.

Using their fingerprint as a key, users can access the system which can be customized for each individuals needs. Supports most document formats including PDF, JPG, and TIFF. The system can produce secure searchable PDFs with embedded password protection, scan to email, to fax, or even directly to a printer. User selectable document destination.

$1249 (FU-FI-6130DUN)

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4600 Athlon X2 (2.4Ghz, 1mb, AM2) 83.95
AMD *Athlon64 X2 Tri Core*
8450 Phenom (2.1Ghz, 3.5mb, AM2+) 155.95
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VIEWSONIC N3235w 32" TV. 720p support
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Linksys Wireless Router WRT300N N300 ..... 109.95
Linksys Wireless Router WRT350N N300 ..... 167.95
Asus Wireless Router WL-500w N300 ..... 121.95
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TP-Link Wireless USB WN620g (G108) 27.95
Trendnet Wireless PCI Card 423pi (G54) 26.95
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Linksys Wireless USB WUSB54G (G54) 58.95
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Intel 10/100/1000 Card Pro1000 (PCI) 37.95
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Trendnet Switch 24-port 100/1000 TEG-S240TX 234.95
Dlink Switch 16-port 10/100/1000 DGS-1016D 178.95
Dlink Switch 24-port 10/100/1000 DGS-1024D 254.95

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HAUPPAUGE 150 for Vista. PCI 61.95
HAUPPAUGE HVR-950 ATSC HD. USB .. 79.95
ADS DVD Express DX2 USB transfer kit. Create DVD's from multiple sources including VHS tapes/camcorders ... 85.95

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Asus P5N-EM-HDMI *NF7100 C2D w/HDMI* 79.95
Asus P5KPL-VM *G31 45nm C2D w/video* 76.95
Asus P5K-SE *P35 45nm 1333mhz C2D* 94.95
Asus P5E-VM-DO *Q35 45nm 1333mhz C2D w/video* ... 125.95
Asus P5K *P35 45nm 1333mhz C2D* 119.95
Asus P5K-E *P35 w/RAID 45nm 1333mhz C2D* 150.95
Asus P5E-VM-HDMI *G35 w/RAID 45nm 1333mhz w/HDMI* 144.95
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V350 Photo 6400X9600 ..... 122.95
V500 Photo,Negatives 6400X9600 ..... 231.95
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LG (H20L) Blu-Ray/HD player+DVDRW . 165.95
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Liteon (LT-LH-2B1S) Blu-Ray writer 362.95
LG (GGW-H20L) Blu-Ray writer 314.95
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DELL
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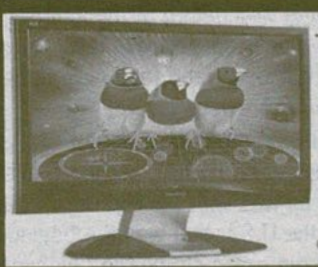

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Flipping the World of Amateur Video on its Head

The Flip Ultra

On June 3 PureDigital Technologies released their portable video recorder, the Flip Ultra, to Canada and the United Kingdom.

The camera is touted as being "the world's simplest camcorder," and after a few weeks of testing, it truly does live up to the title. Being able to shoot within seconds of being taken out of the box — the only requirement being that you insert two AA batteries — the Flip Ultra is truly astonishingly easy to use, with video recording just two button pushes away.

Just flip the on switch, wait for the beep, and hit the red record button. That takes about five seconds total, or 10 if you fumble a little – plenty of time to catch anything from a daring crowd surf to a fireworks finale.

With batteries already included and no USB cables necessary thanks to the Flip Ultra's built-in USB arm, the device really is as convenient as advertised.

Shooting 30 frames per second at 640 x 480 resolution, the Flip Ultra is not meant nor marketed to be a high-resolution capture device, but what it does it does with unparalleled success. The handy camera can capture up to 60 minutes of footage and sports a three-hour battery life on a pair of new AAs.

It also features decent audio capturing capabilities in the record mode and video and audio playback thanks to a built-in speaker and mic and a transreflective LCD screen. The simplistic button layout means that switching between the two modes can be done with one button push, as can changing volume of playback or zoom settings (up to 2x) depending on what mode the camera is in.

The Flip Ultra comes with basic video editing software too, which allows users to plug in the camcorder and get straight to editing, where basic features such as creating still photos, blending videos by setting start and end points, or adding some pre-selected music can be done easily. It can also upload directly to YouTube or AOL quite easily.

Critics of the device may remark on the fact that it doesn't have the best video quality — it is, after all, marketed towards the YouTube generation of rapid file sharing and mid-range quality — or the sound quality, which isn't meant for long-range pickup or loud environments, but for the price (about $170) it is definitely a good value.

On top of that, the Flip doesn't have any auxiliary lighting, so shooting in low-light environments is generally a no-no, though with a 2.4 f-stop lens, it does a decent job.

There also isn't a display for the battery status, meaning that unless you get to the one third mark, you won't know how much juice is left.

Gaining attention

Already released in the United States, the Flip's popularity has skyrocketed since the original model was released in June of 2007. The original Flip was a more basic model than the one that came to Canada earlier this month, and never made it here as the Flip Ultra was already in development for release.

Toronto-born Simon Fleming-Wood, who now works in San Francisco as vice president of marketing for PureDigital, regrets that it took so long for their device to be released in his native land but is proud of the attention that has been garnered by the tiny device for his modestly-sized company.

"We're a small company and I would have loved for it to have come out sooner," Fleming-Wood said. "But there were issues about launching in Canada, we wanted to establish in the U.S. market and expand from there... With a staff of about 50 people, we didn't have the resources to take on the marketing of launching in two countries at once."

He also says that due to the language barrier both with the packaging and with the pre-bundled software, the Flip Ultra isn't yet available in Quebec, but with the popularity of the Flip growing, a release in France and la belle province shouldn't be too far off.

This surge in popularity is mostly due to the viral nature of the Internet, with Flip Ultra users across the web posting their findings and feedback along with their Flip videos on YouTube.

"The original Flip was sort of the foundation of Ultra, but the real success for us was with the Flip Ultra's release (in the U.S.), that was the beginning of the big press stampede," Fleming-Wood said. "We had a successful Christmas and the word of mouth led to the success of our dreams for the first half of the year."

Now that that success has transferred north of the border, Fleming-Wood says that it has a great deal to do with the Flip brand's convenience and ease of use.

"The thing about camcorders that comes up in research is that people hate camcorders; they spend a bunch of money on one, it's bulky, inconvenient, you don't have enough batteries or tapes, and it only comes out once or twice a year for a graduation," he said. "It becomes very boring and you don't want to share it."

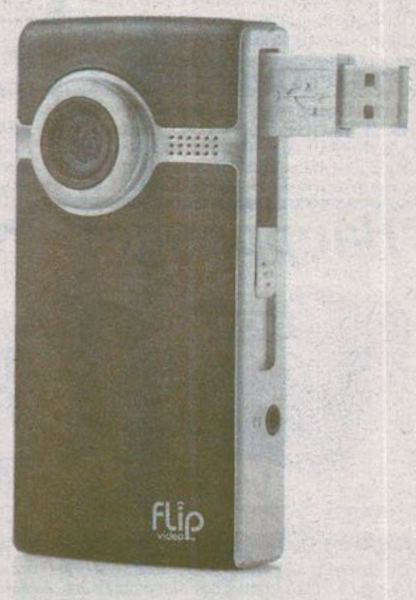
The Flip is made for sharing, as their saying goes ("Shoot anything, share everything,") and that's how the concept came about for the people at PureDigital Technologies.

"Flip turns that on it's head and says that video is an everyday thing, take videos of everything, and it can be fun again, simple and convenient..." Fleming-Wood says. "That's the secret of flip, that's why it's caught on so well, and you can see a bunch of different ways for people to find an application for Flip in their everyday lives."

The evidence is all over YouTube, as anyone who searches for Flip will find on the site, with all sorts of handmade videos made by Flip users for anyone to check out, comment on, or respond to with videos of their own if they feel the creative urge to do so.

For more information, technical specs or a catalogue of products and accessories, go to theflip.com

By Dorian Nicholson



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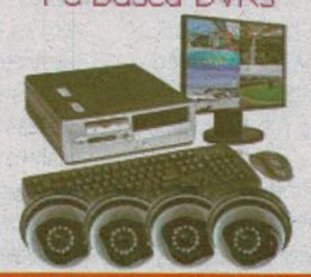

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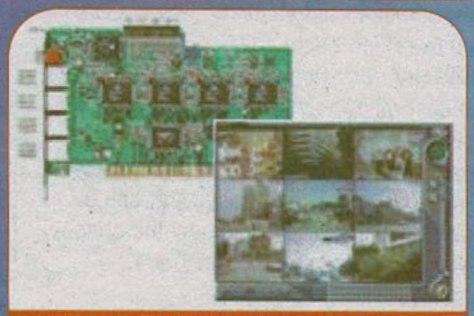

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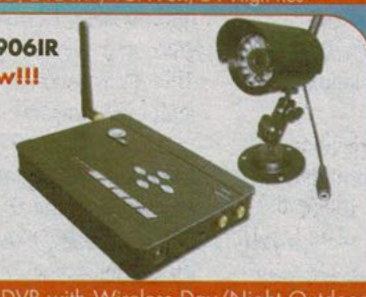

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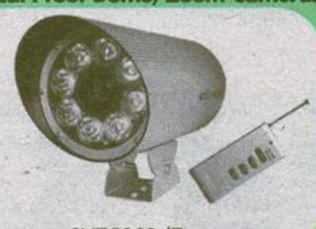

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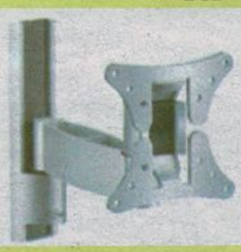

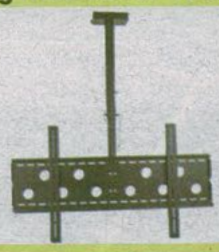

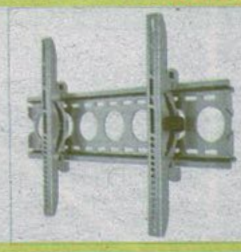

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Web 3.0 Already?

Is the "Semantic Web" worthy of the full digit version upgrade?

With all of the buzz surrounding so called "Web 2.0" features including net-based applications, social networking, tagging, blogs, automated syndication of content and the like, it's often hard to see beyond the hype and determine what the impact of these technologies will be on the web as it matures. While marketing types tout the "2.0 Revolution" as something akin to the proletariat seizing dominion over the network (and the light shone down from above, and all was good) there are other forces at work which, while present to a lesser extent in 1.0, have now seriously taken root and may shape the future of the Net in ways far beyond that which the initial influx of the masses has engendered.

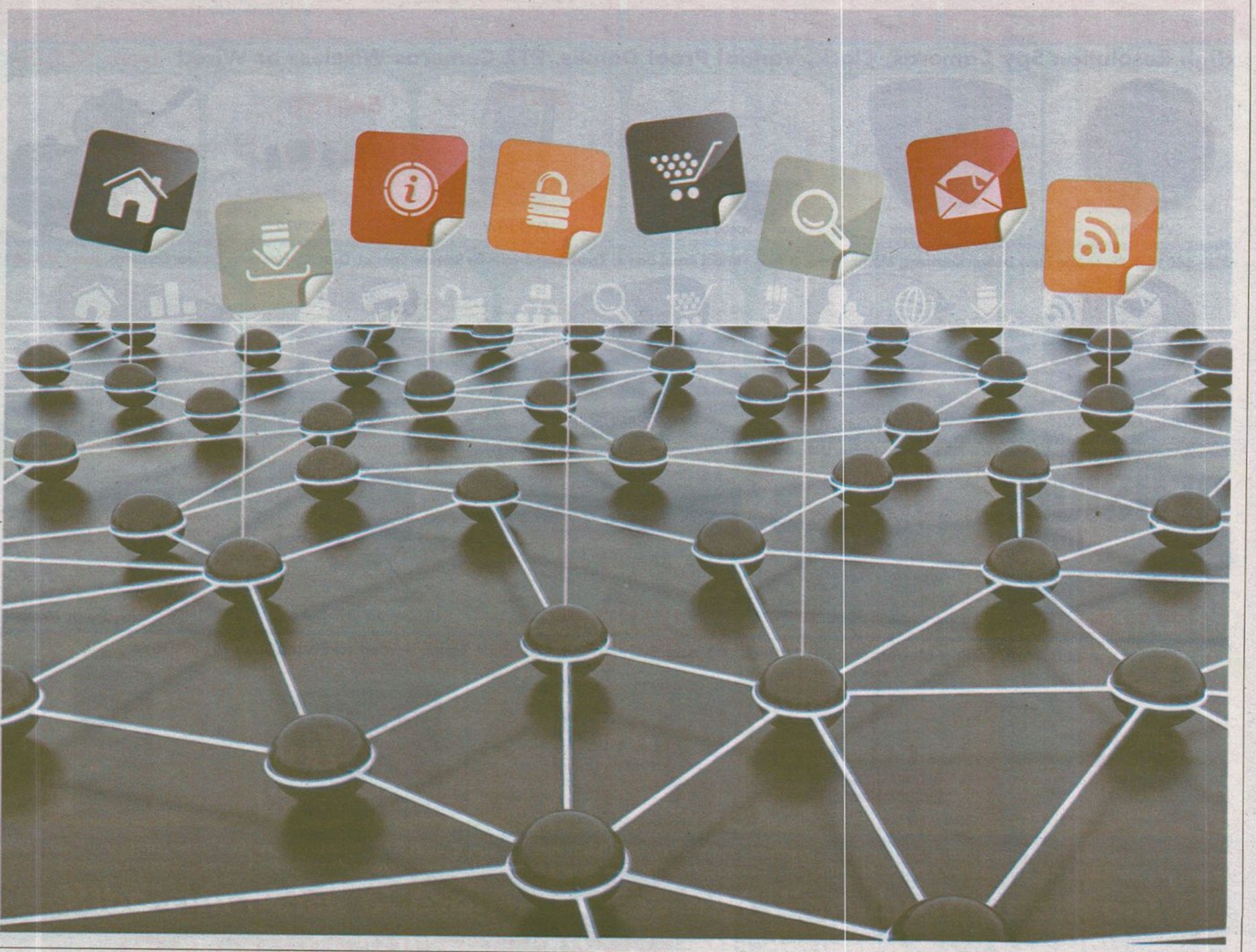
I suppose the goal of "Web 2.0" for those developing and deploying its technologies could be summarized as motivating people to "Sign up and tell us about yourself: What do you find interesting? What moves you to comment? What products attract you? Who are your friends? What do they like? What about their friends?" These questions and many more are easily answered — people willingly offer up the information without a second thought — while the marketers rub their hands together with glee.

So far however, efforts to entice users to disclose data have been largely limited to the individual web entities concerned. If Amazon.com knew you liked Michael Bolton and regularly purchased spray-on hair, then that was the extent of it — other web properties had no idea. People on Facebook might believe you were into gansta' rap and not follically challenged. This information is kept in respective silos and jealously guarded.

So what does all of this have to do with the future of the web? Well, quite a bit actually. Now that "Web 3.0" is gaining some traction as a buzzword in the technical press at least, people are struggling, as they did with its predecessor, to define just what that is. For most, part of the definition stems from the data silo problem illustrated above.

Users have become tired of having to create new profiles and upload new friends lists on every site they wish to join. Data portability is being demanded. To address this issue, various initiatives have come to the forefront including Google's Friend Connect. This application allows you to sign up once, automate the process thereafter for every new site you join, and take your friend data with you. The interesting thing about this is that many of the elements which have been combined to create these solutions (Open ID, Open Auth, and FOAF for example) are components of what has been described as the "Semantic Web."

Originally envisioned by Internet luminaries such as Tim Berners-Lee (creator of the web), the Semantic Web's goal is to create a system whereby the Net's content is more readily understood by machines. At present, web pages are marked up primarily to ensure



they are easily read by the people visiting them. To be sure, there are HTML elements which contain some metadata (descriptive data about the page's content), but these are insufficient to adequately convey exact meaning to anything other than a human viewer. If machines truly were able to comprehend the actual content of an Internet-based resource, be it a database, webpage, music file, calendar, friends list or whatever, it would open up exciting possibilities beyond anything currently experienced online.

To use existing Facebook functionality to illustrate a simple example, let's say I upload a photo of a group of people to the site. I can enter comments about it and others can do the same. That's pretty straightforward, though not particularly useful from a machine comprehension perspective. However, if I were to use Facebook's interface to identify who was in the photo and their X and Y coordinates within its context, I'd have just created semantic data which can be used in quite imaginative ways.

I could, for example, easily perform a sort of high-tech "Where's Waldo." I'd analyze all photos similarly tagged, and referencing the time and date stamp as well as GPS coordinates (already supported by many cameras), automatically create a photographic timeline depicting myself at various stages and locations throughout my life. Unfortunately in the Web 2.0 world, this would only be useful if all photos which depict me were on Facebook. What about all the photos my family and friends have taken? What if they don't use Facebook?

The Semantic Web promises to circumvent these difficulties by removing data barriers and enabling machines to talk to each other intelligently about the exact nature of the content they contain. This would power global access to what's known as a Service Oriented Architecture, wherein Internet-based resources would advertise the services they have available to software-based agents whose task it is to pull relevant data from a variety of sources in order to accomplish the task at hand.

Let's try a more complex example. Suppose I want to organize a big party... how will the Semantic Web help? I'd start by opening my mobile phone and selecting the PartyPlanner Widget. This activates an agent which, combing the web, accesses my global friends list, narrows the results to those residing in my region, compares all their calendars to determine the best weekend to have the party based on availability, and displays the result. Feeling the date presented is too far off, I refine the search to determine the best time this month to have the party. Seeing the results, I discover that the event will be smaller than I'd have liked. I decide to include my friend's friends who live in the area and are available.

"Wow! That's going to be a huge party! I can't have that many people at my house."

I select the "Find Venue" option and, automatically taking the number of participants into account, the agent determines which appropriately sized venues are available whose entertainment for that date satisfies the musical tastes of the majority of invitees. After the agent has returned the list of available venues, I select my preference, enter some descriptive text and hit "Send Invitations." SMS messages go out to all invitees who are presented with a pop-up alert asking them if they want to accept and add the event to their calendars. After determining the number of attendees, the agent will tentatively book the venue or suggest a smaller one based on response.

Can you imagine the power of this infrastructure for more complex situations — weddings for example? Better still, the Semantic Web will empower researchers to gain novel insights by way of intelligent agents scouring the web for data related to their area of enquiry (perhaps generated by researchers working on something completely different) which may not be otherwise obvious.

Unfortunately, despite all this promise, the Semantic Web — that which many are calling "Web 3.0" — faces many challenges if it is ever to realize this potential. Unlike its predecessor, a fundamental shift is required in terms of the way content is created for the medium, as human and machine readable versions must be made available simultaneously. However, with new tools and standards like RDF, OWL and SPARQL coming on-stream all the time, the dream of Mr. Berners-Lee may hopefully soon become reality.

By Ray Richards

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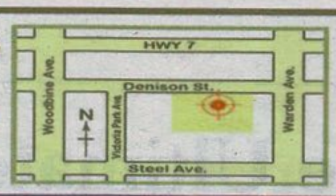

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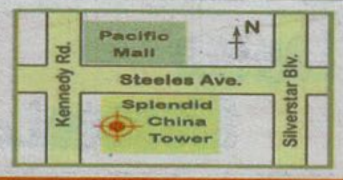

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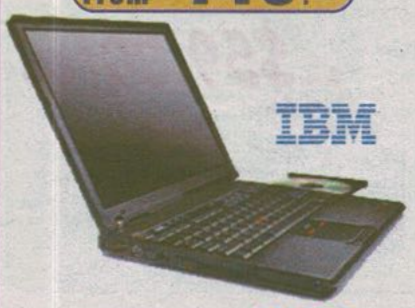

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Building the Ultimate Game PC pt. 3

Finishing up and first boot

We have confirmed what is perhaps the first rule of building your own PC: have a smart and PC-savvy friend. We'd like to thank Simon Bolduc, HUB: The Computer Paper's resident PC doctor for coming by the office to help solve some of the PC's issues and truly living up to his title. We'll even forgive him for setting one of the test computers on fire.

Last month, we closed out the "Assembling the Beast" installment of Building the Ultimate Game PC by highlighting some issues we'd run into and suggesting that the problems were well in hand and easily put to rest with a little problem solving. Turns out, that wasn't quite the case.

When a machine is first powered on, whether it's the first time or the five hundredth, it runs through POST, the power on self test. Or at least, it's supposed to. The Ultimate Game PC turned out to be the Ultimate Pain in the Neck (and looked as though it might be the Ultimate Expensive Paperweight at some points in the process) as it simply wouldn't go to POST. After trying the processor and other components in different motherboards and getting the same result — a complete refusal to POST — we were almost ready to give up.

Potential problem areas:

Processor: The Intel Core 2 Duo Desktop Processor was replaced with the same model (E8500, $300, www.intel.ca). Both work flawlessly and, clearly with hindsight being what it is, the processor was not the problem. Indeed, unless there's been some mishandling or overzealous overclocking, the CPU rarely turns out to be the problem. The LCD Poster (a small, monochrome screen that connects to the motherboard and gives system status updates) always got stuck on CPU INIT, initializing the processor, which led to the belief that it may have been a faulty processor. Fortunately, the problem was actually much easier (and cheaper) to solve. It was CPU related but it wasn't the CPU itself. More on that in a moment.

RAM: Aside from the fact that the Corsair XMS3 DHX TWIN3X2048-1800C7DF 2GB DDR3 (2X1GB, $350, www.corsair.com) RAM had a larger than usual profile and thus required some creative component shuffling to get it to fit, it worked just fine. Or rather, it would have if the motherboard (ASUS Striker II NSE — not Extreme, as previously reported — $410, ca.asus.com) supported the 1800Mhz RAM, which it didn't seem to. Instead, we replaced the Corsair RAM with 2GB of RAM from Kingston's Value RAM series (KVR1066D3N7K2/2G, $170, www.valueram.com). It's not very "Ultimate Game PC" worthy, but it works nicely. Ideally, we'd max out the RAM slots with at least 4GB of faster spec RAM, but we've yet to encounter any problems and the benchmark results are pretty impressive. That said, opting for the Value RAM allowed us to move the DuOrb CPU cooler into a configuration that doesn't block any of the PCI slots and so we were able to install the Creative Sound Blaster X-Fi XtremeGamer Fatal1ty Professional Series sound card ($170, www.creative.com) giving us a sound experience worthy of the Ultimate Game PC moniker.

Video cards: The fact that we've never really experimented with nVidia's System Link Interface (SLI), we thought that could be the problem, though it wouldn't explain why the CPU wouldn't initialize. We couldn't get so much as a flicker on the screen; no error codes, no explanations. Nothing at all.

Motherboard: The ASUS Striker II mobo didn't seem to be a likely culprit. Still, it warranted testing the components of the Ultimate Game PC out on another motherboard (Gigabyte GA-EP45-DS4P, $200, www.giga-byte.com). We got nothing on any of the other socket 775 boards we tested and so it was that much harder to narrow down where the problem lay.

Power supply: While the Thermaltake ToughPower 1000-Watt PSU ($365, www.thermaltake.com) didn't seem a likely culprit either, given that all the fans spun up without issue and the mobo was clearly receiving power, it bore checking out. We grabbed an older PC that was in good working order, plugged our PSU in to the test PC's power connector and Simon shorted the power switch pins to power the PC up. There was a whiff of ozone and the cloying smell of partially fried computer components in the air. Thinking it might have been an anomaly, we tried to short the power pins again. This time, looking at the front of the PC, we were greeted with a flickering orange-red glow from the hard drive access light. I mentioned this fact to Simon, thinking the flickering light must mean that something good must have been happening. It turns out, what I was seeing was a small fire that had broken out on the motherboard, reflected through the HDD light lens. The smell of burning components became stronger and we were forced to take five to air the place out. In the end, the PSU turned out to be fine... though the same can't be said for the PC that so selflessly gave its life in the process. RIP, little guy.

PEBKaC (problem exists between keyboard and chair): As is too often the case, the issue turned out to be sheer human error. It turns out that a lot has changed since I last built a PC; I neglected to plug in a connector from the PSU to the motherboard that is specifically designed to power the CPU. That would explain why, throughout all the building process, the boot seemed to get stuck before it even really started when trying to initialize the CPU. Lesson learned. Egg on face removed. Time to move on.

We finally got the machine to POST and there was much rejoicing. The rest of the process — flashing the motherboard BIOS with the latest instructions from ASUS, finalizing the component installation and installing software was a smooth, if somewhat time consuming process. That said, I was pleasantly surprised by how quickly Windows Vista Ultimate installed. It would have been faster too, if we'd been able to flash the motherboard's BIOS before the install so that it would recognize the 3.16 GHz Core 2 Duo Intel processor. Instead, it only recognized as a 2 GHz chip. While there is an option in the BIOS to use the ASUS EZ Flash utility to update the BIOS without having to boot in to Windows, we couldn't get it to work in our tests. So, a note for anyone thinking of using a Linux system instead of Windows: Watch out, you may have to go the dual-boot route or at least find some work-around in order to flash the BIOS without Windows as the process for doing so before booting into the OS simply doesn't seem to work.

Benchmarking

Our Ultimate Game PC is an impressive beast, to be sure. However, after submitting our 3Dmark Vantage scores online to be compared against the rest of the 3Dmark community (www.futuremark.com/community/) our rig was trumped handily by the top performing rig at the time. Our respectable score of P5718 3DMarks looks pretty lame against the P23601 3DMarks uber PC currently at the top of the heap. We have to wonder how much that system cost though. Our total component cost clocks in at around $2,500. We could have scrimped on the power supply ($365), the case ($280)

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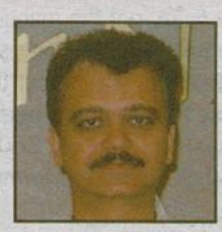
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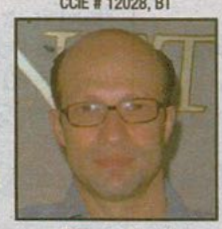
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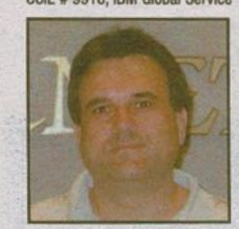
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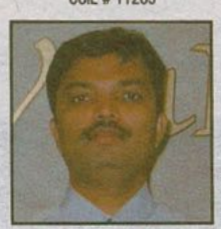
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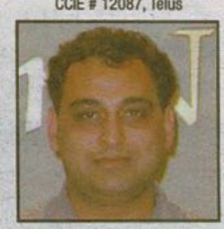
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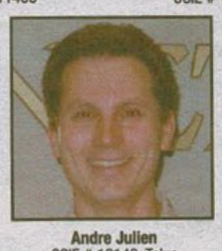
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and a few other components and built a system with as much power for less. In the end, our system clocks in at the low-mid range of the 3Dmark "Performance" category, judged against community results. The reason for this is likely the RAM; 2GB should be considered a bare minimum in desktop machines running Windows Vista. Our 2GB of Kingston Value Ram at 1066MHz is the likely performance bottleneck.

In truth, by the time we finally got the machine running properly, we were just happy to see it POST and then boot the operating system (Windows Vista Ultimate 64-bit, $210, www.windowsvista.com). Maxing out the RAM slots with 4GB or even 8GB of RAM would go a long way to solving our performance issues. That said, to say a machine that can run Crysis (EA Games, $60, www.ea.com/crysis) at next to highest specs, full screen (1,440x900) has "performance issues" is perhaps a little unfair.

Testing: Round 1

First test:	**Second test:**	**Third test:**
3Dmark Score: 5718	3Dmark Score: 5695	3Dmark Score: 5714
CPU: 6573	CPU: 6486	CPU: 6590
Graphics: 5481	Graphics: 5475	Graphics: 5472

Testing: Round 2: With Windows Vista graphical flair turned off in an (apparently vain) attempt to lessen its RAM footprint and boost our scores

First test:	**Second test:**	**Third test:**
3Dmark Score: 5710	3Dmark Score: 5690	3Dmark Score: 5692
CPU: 6585	CPU: 6412	CPU: 6548
Graphics: 5468	Graphics: 5484	Graphics: 5454

What we learned

In the future, I'd suggest opting for a liquid cooling system in a machine like this. The fans can get a little loud as there's a lot of surface to cool and a lot of components running hot. The DuOrb CPU cooler ($70, www.thermaltake.com) is the quietest of the fans, it seems, and the large case fans in the Thermaltake Armor+ Full-Tower ATX Case (VH6000BWS, $280, www.thermaltake.com) are the quietest of the lot. The two ASUS EN9800GTX GPU cards ($350, ca.asus.com) with their tiny, fast-running dedicated fans, seem to be the worst offenders where noise is concerned.

It's very important to check that everything you're planning on packing into your PC build project will play nicely with everything else. We ran into some issues with incompatible hardware that forced us to make some sacrifices, sacrifices that are apparent in the benchmarking scores.

All in all though, we've assembled a pretty solid gaming PC. Is it worthy of the Ultimate Game PC title? Perhaps not. Does it play all of today's games with a good framerate at high resolution at better than average graphics settings? Absolutely. Could we have achieved the same net performance at a lower overall cost? Definitely. Is it worth entering our contest to take this beast home? Of course it is!

Visit www.hubcanada.com for contest details.

By Andrew Moore-Crispin

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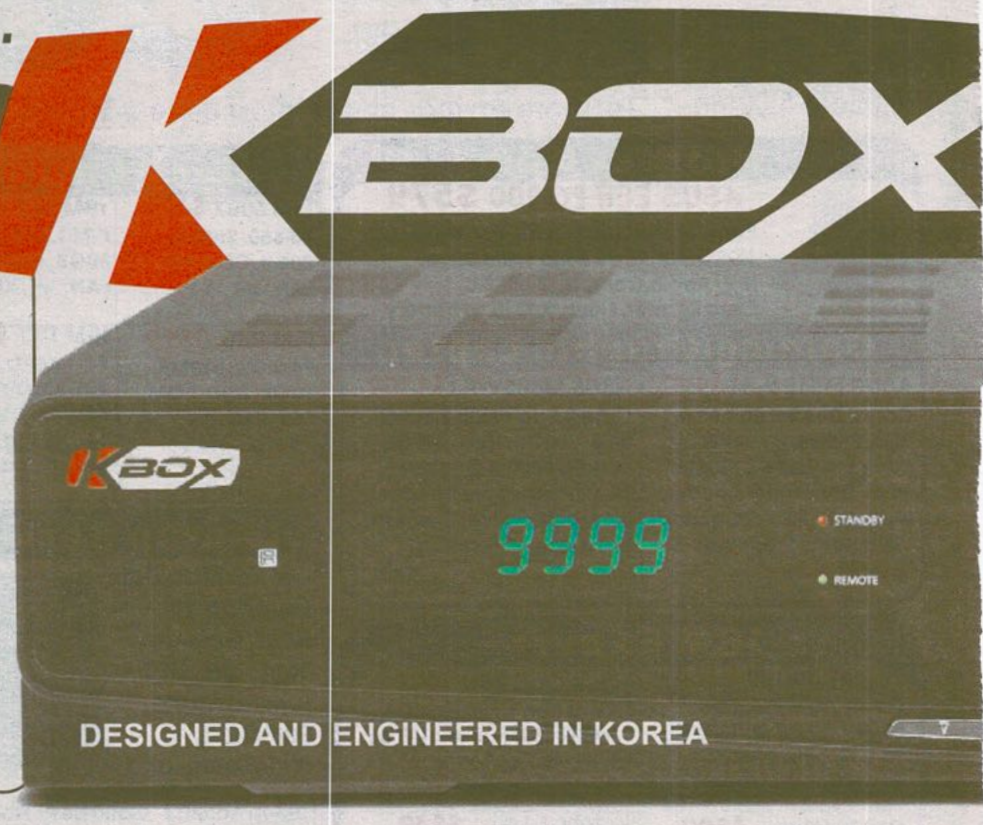

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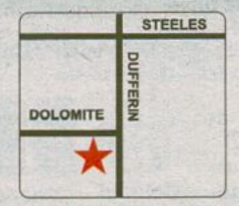

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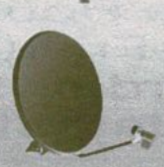

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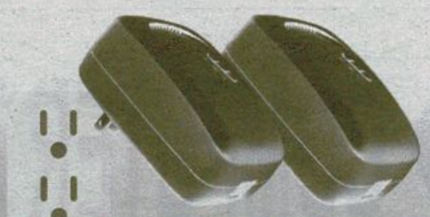

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The Whys and Wherefores of WiMAX

A far-reaching look at long-range wireless Internet access

First, there was Hi-Fi. Then there was Wi-Fi. And, as any golfer knows, there's Maxfli. So where does WiMAX fit into all this? How about as the potential successor to the aforementioned Wi-Fi? How about as a high-speed wireless medium that's fast enough not only for the Internet, but for simultaneous streaming video, telephone, and online gaming — at home and quite possibly in your car? How about as a "last mile" technology that blows the doors off the current Wi-Fi "hotspot" limitations of approximately 300 feet, and instead delivers a range measured in kilometers — anywhere from one or two kilometers all the way up to 50, depending on factors we'll discuss.

If that sounds impressive, know this: WiMAX (Worldwide Interoperability for Microwave Access) is no pipe dream. The technology is already deployed to some extent in more than 100 countries worldwide. Leading chipmaker and WiMAX proponent Intel has invested several billion dollars into WiMAX and is currently developing chips and hardware (such as the Centrino 2) with embedded support.

Just over the border, megacorps such as Google, Time Warner, Comcast, Sprint, and of course Intel, are throwing a ton of effort and mountains of cash (US $3.2 billion at last count) into establishing a nationwide WiMAX network. The conglomerate hopes that fully half of the U.S. population will have WiMAX availability by 2010, and dreams of a world where users can have the same level of broadband service they're accustomed to on their home PC wherever they go, without wires.

Third world communication solution?

WiMAX can be seen as the next logical step in the evolution of modern connectivity. And in developing countries, it may be just the thing to bring the information of the Internet and large-scale communication to those who have never before had either. Certainly it's a more affordable solution than digging and burying cables. Let's take a look at how it works.

Currently, Internet (and email) access arrives at your computer through one of three common avenues. At home, chances are you subscribe to a high-speed broadband service that travels via cable or telephone wire (DSL) all the way to the outlet in your wall. You then plug a modem into that outlet and connect your computer or router to the modem.

However, if you're not within the range of local broadband service (as is the case in some rural areas) or if the monthly charges of broadband seem a bit too unwieldy, you might be one of the many people who still rely on old-school dial-up access. It may be slower, but it remains a viable option in some regions — Saskatchewan, for example, where 12 per cent of the population remains outside the reaches of DSL and wireless broadband.

But if you want to unplug — either at home or on the road — Wi-Fi is currently the only option. Wi-Fi is essentially identical to hardwired broadband right up to the very last link in the chain — the modem/router. Here, the data moves to and from the computer wirelessly, via a transmitter and radio waves, much like a sophisticated walkie-talkie.

Wi-Fi tribulations

But when you pull out your notebook and connect wirelessly to a "hotspot" in a coffee shop, airport, or library, you're relying on the capabilities of the installed wireless network. Yet just try straying more than a few hundred feet from the end physical point of that network, and poof, your connection disappears. That, of course, is why the dream of mobile connectivity from your car or truck has remained just that — a dream.

WiMAX, conversely, is like a really, really big hotspot. The Internet "cloud" or "backbone" is funneled through an Internet Service Provider in just the same way as standard broadband. The data is then sent via traditional T1 or fiber optic cables to its next destination. But rather than going directly to nearby "wired" end points, the data travels to a WiMAX tower — often a specialized WiMAX tower but in many cases an existing cell phone tower, fitted of course with the appropriate WiMAX gear and antenna.

It is from this antenna that the WiMAX signal flows wirelessly to its final destination. If that final destination is your car, you'll need to install an antenna to pick it up. If the final destination is your home, you can have either an indoor non-line-of-sight WiMAX receiver or, preferably, a substantially more powerful line-of-sight receiver mounted outdoors where it can better grab the signal. The data is then distributed to the various WiMAX-capable devices within your home via a traditional Wi-Fi or wired setup.

But data is also passed along between WiMAX towers, using a line-of-sight wireless link. This is often referred to as "backhaul," a course of action that expedites the process and helps blanket an entire area.

Rumors and embellishments

How close you'll need to be to a WiMAX tower in order to take advantage of the service, and how fast it's actually going to be once deployed in real world situations are questions not easily answered. Though it can authoritatively be said that a single WiMAX tower can deliver at least several square kilometers of coverage, certainly the 50 kilometer range that's currently being touted around the Internet is far from guaranteed. For starters, extreme distances increase the likelihood of bit rate errors. Lower bit rates must then be used for long range reception, thus decreasing the speed.

You'll also need to consider the type of antennas you use. High-gain exterior home antennas increase the range and throughput, while small antennas mounted inside the home or within a notebook or PC aren't nearly as capable. And if you're in a vehicle, you'll need to take your surroundings into account. In densely packed, highly built-up urban areas, for example, reception won't be as reliable as it might be in the relatively uncluttered 'burbs.

That said, one of the many WiMAX advantages is its dual delivery systems: "Fixed" WiMAX for stationary customers, and "mobile" WiMAX for customers on the move. The latter, which is a far more expensive technology, enables one base station to "hand off" duties to another as the user changes his or her location. Furthermore, WiMAX is no newbie. It's been in the development stage since the beginning of the decade, and one would certainly hope that the now-powerful WiMAX Forum (www.wimaxforum.org) will ensure a quality product before widespread release.

Speed racer?

How fast will WiMAX be? According to the WiMAX Forum, "Users can expect to have broadband access speeds ranging from one to five Mbps (megabits per

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second) depending on the service provider offering. Plus, there is a range difference because it depends on a number of factors, including which frequency is being used, distance of the user from the base station or node, whether there is line of sight or non line of sight to the base station, and the number of users on the network."

And that's the catch when trying to assess its speed — there are simply too many variables and we're just too early to say for sure how fast WiMAX will be in practice. For the reasons outlined above, it will almost certainly vary from user to user. We can say with some confidence that although it won't put your wired broadband connection to shame, it should at the very least rival Wi-Fi speeds.

Will that be fast enough? In a recent column in the Chicago Tribune, technology reporter Eric Benderoof marveled at the technology, saying he surfed the web, played music from an Internet radio station, and received instantaneous traffic alerts the moment they were released — all while driving through the temporarily WiMAX-ified streets of Las Vegas. Try that with Wi-Fi.

Others, though, point to the long-delayed birth and rollout of WiMAX as reasons for pessimism. Indeed, one can scan the Internet and find no shortage of vapourware — products that were scheduled to make it to market in the last several years but that never did. Meanwhile, competing high-speed wireless technologies such as LTE (long-term evolution) are making noise and picking up prominent backers such as AT&T and Verizon Wireless.

Still, here in Canada, the WiMAX train certainly hasn't been derailed. Bell Canada says its WiMAX service is available in 178 cities across the country, and currently offers both indoor and outdoor antenna setups.

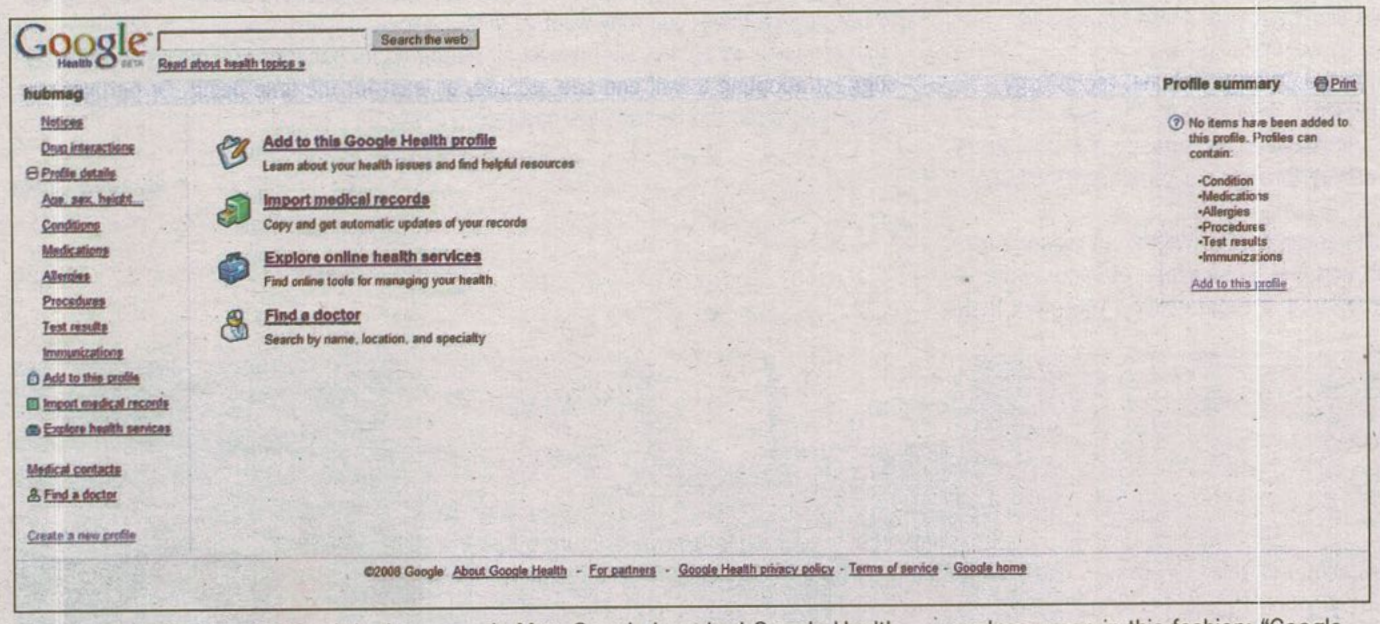
For its part, Primus has begun a free WiMAX trial in Hamilton, Ontario. If you happen to live in Steeltown, you may want to give it a look.

As promising as WiMAX seems and as strong as its backers are, we'd nevertheless suggest adopting a wait and see attitude, at least for the time being. Or perhaps you've forgotten the lessons learned from HD DVD?

By Gord Goble

Google What Condition Your Condition Is In

Web 2.0 and your health



Google needs no introduction. It is the single most dominant force on the Internet and perhaps the most influential company in all of information technology. It has already accomplished something that has eluded Microsoft — entering the dictionary as a verb.

In May, Google launched Google Health (GH) in the United States. It will likely be in beta mode for years but it is already of value to those who are using it. Currently that is limited to Americans.

Google's official position on widespread availability was stated by a spokesperson in this fashion: "Google Health is currently available in the English language and the U.S. only. We are always looking to extend our products and services to users worldwide, and we hope to continue to expand Google Health to other countries and languages in the future. In the case of Google Health, there are very different rules and regulations concerning privacy and the ways personal health data and electronic medical records are stored in countries outside of the U.S. This will not be a hasty process."

Google's position notwithstanding, there doesn't seem to be anything preventing non-Americans from taking a look at www.google.com/health.

Google Health allows an individual to keep his or her health records online. This data can be input manually and/or imported from clinics, hospitals, pharmacies, or other places where health records are housed. That by itself would be tremendously valuable but GH does more than just store and display your health records. It can check your medications for dangerous and unintended interactions, send you alerts based on your profile, analyze your data for dangerous conditions and remind you to take your medications by sending messages to your cell phone.

Google Health, like other Google applications, has an uncluttered interface. After logging in with the same user name and password you might use for Gmail or other Google services, you have four choices: Add to this Google Health profile, Import medical records, Explore online health services and Find a doctor.

You start building up your profile by entering basics such as age, sex and height. GH automatically calculates your BMI (body mass index), a simplistic measure of whether you are underweight or overweight. As you add to your profile, GH is able to do more interesting and valuable things with your data.

Once you've completed the basics, you enter more detailed information in the following categories: conditions, medications, allergies, procedures, test results and immunizations.

Conditions

Here is where you choose your conditions (diseases or other problems) from an unusually extensive list. Typing the first few letters is usually all you need to do. Most conditions have a "Reference" link to a page with detailed information and links to other resources.

Medications

You enter your current medications in the same way. There is considerable detail on each of the thousands of meds listed. I liked the inclusion of the information in the package insert, something most of us get rid of after opening the package. It contains guidelines such as how to use, how to store, what to do in the event of missing a dose, side effects and so on.

GH scans your medications for unintended interactions. Since many patients take medications that have been prescribed by different doctors and dispensed by different pharmacies, this is an important line of defense. Drug interactions kill thousands of people in Canada every year.

Allergies

Same as before, you choose from a list and add details if desired.

Procedures

Examples of procedures include appendectomy, hip replacement, dental x-rays and the like. I didn't count but I estimate that there are more than a thousand to choose from.

Test Results

Every time you have a physical, a huge amount of data is generated. Weight, blood pressure, blood work results, ECG, ultrasounds, etc.

Immunizations

If you stepped on a rusty nail while on a camping trip in another province, would you be able to tell the clinic that you went to what your Tetanus vaccination status was?

In the U.S. Google is working with partners on Google Health. They are found in "Import medical records." These are hospitals, pharmacies, and labs that maintain records online for their patients and customers. The list consisted of just one partner in February but now includes two hospitals (Beth Israel Deaconess Medical Center in Boston and the Cleveland Clinic), Quest Diagnostics (lab test results), Longs Drug Stores, Medco, RxAmerica, Walgreens Pharmacy (medication histories), and MinuteClinic (largest provider of retail-based health care in the U.S.). Users who deal with these institutions and companies can import their data into their Google Health profile. The number of partners should eventually be in the thousands.

The remaining two main menu choices are "Explore online health services" and "Find a doctor".

There are independent online health services that understand the format that Google Health uses to store user data. You can send part of your profile for analysis and other services. Some services are free while others are offered for a fee.

A leading example of a free service is the Heart Attack Risk Calculator provided by the American Heart Association. It uses values from your GH profile to estimate your risk of having a heart attack or dying from heart disease over the next 10 years.

ePillBox.info by Solventus is a free web application that uses information from your GH profile to create a medication schedule based on your prescriptions and your preferences.

The prestigious Cleveland Clinic offers MyConsult which connects you to their physicians. Top specialists provide second opinions and nutrition consultations.

Finally, the "Find a doctor" section is very comprehensive. It lets you search by name, specialty, and location. There are about 100 distinct specialties ranging from Accupuncture to Urology. There are some unusual choices, such as Pediatric Sports Medicine, which I didn't realize was even a field. There are also non-medical choices such as Chiropractors, Dentistry, Nutrition Counselling, Optometry, Osteopathic Medicine and Podiatry.

This module works for Canada. I tried choosing Pain Medicine for Winnipeg and received 265 hits. They weren't all suitable or at least not what I expected. The hits included psychologists (different kind of pain), ergonomic physiotherapists and hospices. Still, there were many hits of what I was looking for and each took me to a Google map of their location, contact information, and a website if there was one.

Work to be done

Google has a lot of work to do before it brings Google Health to Canada. Privacy and security are concerns. At the moment the only thing standing between a user's private and sensitive medical data is the same password used for Gmail. That needs to be improved.

Google needs to make arrangements with provincial health regions, clinics, pharmacies, diagnostic labs, and individual doctors to connect their patient health records to Google Health. That's a process that will take years. Early discussions with Canadian authorities have highlighted a problem. Google Health is free and Google intends to make money in the American market by using the same advertising model used in Gmail — targeted text ads. Health ministries in Canada don't find that acceptable, so Google must figure out a new financial model for GH before launching in this country.

Google is not alone in targeting consumer-oriented health care. Microsoft, Revolution Health, and WebMD are among the heavyweights who are competing for a slice of the action. Individuals want to take ownership of their health care and their health data and the market for products and services that can help them do this will be huge. Now that I have a taste of what Google Health is going to be capable of, I myself am very impatient for its official arrival in Canada.

By Issie Rabinovitch

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Cracked in 60 Seconds

Why WEP isn't strong enough for your home network

If you have a wireless home network one of the first things that the experts recommend that you do is to make sure it's secure — after all, your wireless signal blasts its way fairly easily through walls and doors, which means an unprotected wireless network is often as easily accessible from the street in front of your house as it is from the bedroom or office.

You may think that leaving your network unprotected isn't that big a deal... if someone else wants a bit of Internet access, why not just let them borrow some of your bandwidth? Well, in addition to the fact that a digital hitchhiker may be doing something illegal (downloading pirated software) or at the very least extremely unethical (sending out spam email), there's something far more worrisome to consider.

Anyone who has access to your home network also has the capability to intercept every packet you send over the wireless network — your passwords, web sites you surf to, and any other web-based activity. Additionally, when they connect to your wireless network, their computer becomes part of your local area network, which means they could also snoop around shared folders on other machines, try to pry open security holes on those computers, and even try to break into the security settings of your router itself. In short, it's a perfect recipe for identity theft, and the thief doesn't even have to dive into your garbage can to get the information.

The quickest way to protect your network from unwanted visitors is to encrypt it. When you encrypt your network, the data that's flying back and forth wirelessly is encoded using a pre-arranged key that's entered both into your wireless router and your computer — the computer encodes the data packet using the key, and the router decodes it, and vice versa. Without the key, the data looks like gibberish to the casual observer, who is then effectively locked out.

For the longest time, the solution to the problem was something called Wired Equivalent Protocol, or WEP. Initially named because the standard was designed to provide the same security as a hardwired networking cable, the name has unfortunately become a misnomer thanks to the efforts of resourceful hackers. In fact, if you're currently using WEP to protect your network, you're only 60 seconds away from being compromised.

WEP gets wiped out

One of the keys to security is a strong password. Think of it this way: if you were encrypting a data stream and you only had 10 possible codes you could enter, all you'd have to do is try decoding using each of those numbers... and with only 10 variations, you'd break the code very quickly. That's why it's always preferable to have a longer code when you're encrypting a data stream — while any encrypted data is susceptible to cracking by brute force, a long-enough code would cause a brute force attack to take so long it would be impractical.

In the beginning, WEP featured a wireless key length of 64 bits, which featured 72,057,594,037,927,936 different potential combinations — already a formidable-seeming number — and then introduced 128-bit and 256-bit keys to make WEP even more secure. The problem? You don't actually have to try all of those different combinations in order to figure out what the key is... all you have to do is sit and listen.

The main problem with WEP is that it doesn't take all that long before the encryption wraps around and starts to repeat itself — which means a decryption program doesn't have to try every combination, it just has to start looking for patterns in what's being generated using the assumptions it already knows about WEP, such as key length and encoding methods.

The end result is that a WEP-cracking program can sniff out the encryption key in as little as sixty seconds... probably a fraction of the time that it's taken you to read this article to this point. Don't believe me? Head on over to YouTube and search for "WEP crack" and you'll see a number of how-to videos that show you how quickly you can crack a WEP key, and the bewildering number of hacking tools available to do just that.

Does that sound like an adequate level of security? Didn't think so. What's worse: even though wireless router setup programs now strongly recommend enabling wireless security during the initial setup process, they typically steer users towards the now easily-crackable WEP, leaving users with a false sense of security.

Linksys WRH54G

Ways to change your wireless network's encryption settings

1. Run the router's setup program again. Often there is a choice during the setup process as to what type of security you'd like to apply to your system. Sometimes this program will actually allow you to choose between WEP and WPA in the setup program. You may want to see if there's a new version of the router's setup program at the manufacturer's website, too.

2. Surf to the router's configuration web page. Pretty much every wireless router has a web page interface which you can get to using your browser. Typically, the router's default IP address and username/password combo are listed in the router's user manual. Because there are so many different makes and models, you'll have to poke around in the settings tabs to find the exact place to find the wireless encryption setting, but from the main menu it's often a good start to look for a "Wireless" tab, and then to look for security once you get there. Of course, you could always read the router's manual for the exact configuration details.

Batten down the hatches

If your router was released within the last couple of years, chances are the solution to your problem is just a few clicks away: change your router's settings so that it uses the more secure encryption method known as Wi-Fi Protected Access, or WPA.

Introduced to fix some of the inherent problems found in the WEP specification, WPA is more secure for multiple reasons, with one of the major ones being a dynamically changing key, making it much harder to identify patterns in the data. Also, instead of a string of hexadecimal digits, a WPA "key" can actually be a full alphanumeric passphrase, including punctuation and spaces, making it easier for a user to memorize a lengthier (i.e. stronger) key.

If your hardware is even newer, it may support the more recent WPA2 protocol, which is an even better choice. If your router currently only supports the older WPA encryption, you may want to check the manufacturer's website to see if there are any firmware upgrades available that add the functionality to your router.

Don't worry too much if you don't have WPA2 at your fingertips; WPA is still a marked improvement over WEP. If all you have on your router is WEP however, you should seriously consider a trip to your local computer or electronics store to pick up a new router that has better security.

by Sean Carruthers

The Feed
from www.hubcanada.com

YouTube Hits Sony BRAVIA TVs
By Harry Powell
Sony has announced that YouTube is the latest online video provider to join the company's BRAVIA Internet Video Link service. The service is providing BRAVIA Internet Video Link users access to the millions of videos on YouTube at no additional charge — well, except for the charge to purchase the link module.
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Zune + Joy Division = BFFs 4ever
By Harry Powell
In a unique marketing move that displays they may have no clue who their demographic is, the mighty Microsoft Corp. is releasing a limited-edition Zune digital media player designed by Peter Saville to commemorate the DVD release of "Joy Division," a documentary on the post-punk band.
www.hubcanada.com/feed/224

PickupPal Picking Up the Business
By Dorian Nicholson
The summer is almost upon us, and that means that those opting to drive to and from the workplace will be dealing with skyrocketing gas prices. While the average motorist might be fuming at this sudden shift in the economics of travel, the change works out for the better for PickupPal.
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Nintendo DS to Release Allen Carr's Easyway to Stop Smoking Game
By Dorian Nicholson
Joining a brand new line of self-help titles developed by Ubisoft for Nintendo's DS such as My Word Coach and the upcoming My Weight Loss Coach — a hand-held video game promoting weight loss — is Allen Carr's Easyway to Stop Smoking.
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McAfee Releases Second Annual MalWeb Report
By Dorian Nicholson
A new report released by McAfee, Inc. states that security threats across the Internet are not only growing and evolving but also vary from country to country and domain to domain. The statistics are based on findings from McAfee's well-respected SiteAdvisor program.
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BlackBerry Keeps Getting Smarter with Rogers and RIM
By Harry Powell
Rogers Wireless and Research In Motion have introduced the new BlackBerry Pearl 8120 smartphone to their loyal customers in Canada.The new smartphone supports Rogers Home Calling Zone, you know, the one that enables customers to make unlimited voice calls over a wireless Internet connection — because your connection never goes down.
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Amp Your Game Tour
By Harry Powell
The country's biggest national video gaming tour, Amp Your Game, is set to roll across Canada this summer - stopping at nine major cities from Halifax to Vancouver and guess what? They are looking for Canada's best gamer to be the fourth member of the Amp Energy Pro Team along the way.
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Bell Mobility and MasterCard Test Cell Payment Option
By Brady Yauch
Consumers tired of having to trudge through cluttered purses and wallets in search of the right credit card may finally be presented with a solution. MasterCard Canada is testing its Near Field Communications (NFC)-enabled phones on Bell Mobility's wireless network.
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Xerox Releases Groundbreaking New Gel Ink
By Dorian Nicholson
Printing companies from around the world gathered in Dusseldorf, Germany for Drupa, the print industry's largest exhibition and product showcase last month. In the middle of this exposition, and undoubtedly one of its focal points, was Xerox unveiling a new form of gel ink which may be revolutionary enough to reshape the industry.
www.hubcanada.com/feed/201

New Products:

Skipping a Generation: iPhone 3G Coming to Canada
By Hub Canada
Rogers Communications and Apple announced that the highly anticipated iPhone 3G will be available in Canada on July 11. iPhone 3G combines all the features of iPhone with 3G networking that Apple claims is twice as fast as the first generation iPhone
www.hubcanada.com/feed/232

HP Unleashes New Voodoo Desktop and Portable
By Hub Canada
HP recently announced a new portfolio of Voodoo-branded computing devices targeted at high end gamers and users. The first two in the portfolio — the powerful Voodoo Omen desktop and the ultra-mobileVoodoo Envy 133 notebook — were unveiled at the HP Connecting Your World event.
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Compiled by Dorian Nicholson

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Toronto's Assistive Technology Exhibit Lights the Way for the Visually Impaired

Exhibit reveals the world in innovative new ways

On Tuesday, June 3, the Toronto chapter of the Canadian National Institute for the Blind hosted an exhibition for new products for the visually impaired and other special needs users.

The products and gadgets on display ranged from the Daisy Reader, an electronic book reader that can read audio books in various formats to users, to the Sendero GPS software which comes bundled with all sorts of data and many features that can read various geographical information to users — from the direction of a street to the location of a store.

Brad Lachowich, Regional Supervisor of Client Services for CNIB in Toronto, says that the event has been going on for more than 14 years, each year exhibiting the changes in technology and what the new devices can do to help those living with special needs.

"Every year we try to get a sense of what our clients' needs are. We stay in touch with the vendors for when they come out with their latest technology and many of the same vendors come back (with new innovations)," Lachowich, who left a position in finance and business to join the not-for-profit CNIB, says. "A lot of what is here are the same products, but evolved versions, like CCTV units — which have been around for a while — except now there are also portable versions."

An evolution

As the devices showcased at the CNIB's events evolve over the years, so too has the CNIB's purpose over the decades it has served the public. After its conception in 1918 — spurred by many of Canada's soldiers returning from the war blinded or with damaged vision — the purpose was largely to provide care for those with vision loss, taking care of them in ways ranging from providing food and clothing to maintaining housing exclusively for the blind or visually impaired.

Now, however, the CNIB attempts to take on more of a supportive and proactive role, educating Canadians about how to prevent vision loss and take care of their eyes while still helping its clients to gain access to the services that they require.

"In the past we would drive people around or take them shopping, but now we help them develop those skills to live and travel independently," Lachowich says. "We help them to access technology that will help them achieve independence — and rather than offering the service, we attempt to show them how to do it themselves."

And that's where the CNIB's assistive technology exhibit comes into play. Those who came to the free event were able to get their hands on the next generation of accessible devices and see and feel them in action, explained and displayed by the same people who either developed the technology or distribute it.

Gil Lutz sits in front of his Sendero-equipped GPS unit at the CNIB's Assistive Technologies Exhibit.

Gil Lutz, representing Sendero Group at the exhibit and also a training specialist for the company, has had plenty of time to get acquainted with the technology developed by Sendero. He has been with them since 1998 and watched the power and potential of GPS in helping those with visual impairment grow over the years.

At the same time, Lutz, who suffers from retinitis pigmentosa, has witnessed his vision decline over the years and has come to rely more on the GPS systems developed by Sendero Group, and also to depend more on his faithful companion, Eve — his "furry Ferrari," as he calls her — a black Labrador retriever.

"The Sendero GPS system is a software system that loads onto current notetakers that are currently available, like all of the HumanWare Braille Notes, the GW micro voice sense, (and others)," Lutz says of the device he now carries with him everywhere he goes.

A device with direction

The device is certainly indispensable for those who learn how to use it effectively and use it as a means of understanding their surroundings. While a GPS system that reads out directional and geographical information could be a novelty for a person blessed with good sight, a person with limited or no vision would be unable to accurately judge what address they are at, what direction they are facing, or how far they are away from their destination without an appropriate aide, such as a GPS.

"It will give you information on where you are, what is around you including shops, what the address range is on the street that you're on for the side that you're on, upcoming intersections, how many lanes, how fast the traffic is going," Lutz says. "It gives back all the location information that a sighted person takes for granted."

One thing that a person that relies on eyesight would find interesting about the device is that the reader that Lutz's software is loaded on has absolutely no visual display at all — it is manipulated entirely through the keyboard and the machine's results are relayed back to the user through the onboard speakers, or through headphones.

That fact should not be entirely surprising considering that Lutz, like some of the other exhibitors showcasing new products, has very little vision. While I sat in the minivan waiting for our driver to return so that we could take the unit on the road for a tech test drive, Lutz informed me that he couldn't see me at all — although his eyes were locked on mine. This has to do with his condition and the low light; retinitis pigmentosa also causes nightblindness. But with the help of the Sendero developed software, Lutz has an easier time moving around new cities.

Being from northern Ohio himself, Lutz isn't terribly familiar with Toronto. But with the GPS device, loaded with Sendero software, Lutz is able to go out and get a bite to eat at a restaurant he's never been to. He can look up the address, how to get to it by foot or by car (routes may vary depending) and also request details like the phone number, which he can call for the menu — being a vegetarian — the store hours, and other info.

"I travel independently worldwide, and I couldn't do it nearly as well as I could without this," Lutz says, although he is quick to point out the limitations of the device. "As I said before, this does not supplant the good training that you get, it's a great tool... but it will not replace co-ordination and mobility. If you're relying solely on GPS, you're going to get in trouble."

Marco Gregnanin, developer of the software used by the SiRecognizer, holds a UMPC loaded with his technology.

Other devices showcased at the exhibit to make life easier for those with impaired vision included the knfb Reader Mobile by knfb Reading Technology Inc. and the SiRecognizer, developed by Itex, both of which are made to help the blind to read text.

Innovative Auto-readers

The knfb Reader Mobile is a software package that can be loaded onto a multifunction cell phone. Once loaded, the software will allow a user to take a picture using the camera phone, and any text that is in the picture box will be read aloud at the touch of a button. This feature can be used to read anything from labels to receipts and other documents, and is truly portable since it is only the size of a cell phone and can be carried anywhere.

The reading speed can also be adjusted based on the user's preference so that it can be made faster or slower for different lengths of text. The text is also shown on screen in adjustable magnifications with text being highlighted while it is read. Knfb also offers the kReader, a slight variation of the software which is made specifically for people who have learning or language problems.

The SiRecognizer by Itex takes the idea of a portable word reader even farther. Using a specially developed software loaded onto a UMPC (ultra-mobile PC) with a camera, the SiRecognizer can easily take pictures of objects and read the text found on them aloud.

While that may sound similar to the knfb devices, there are several important differences. The SiRecognizer can read labels on any type of object, from a can of soup to a Drumstick ice cream cone, and at a distance as well. It can also speak and recognize over 130 different languages, making it perhaps the most diverse invention of its type currently in existence.

"The system has more than 160 features, it can recognize handwriting, and it is good for children who want to learn writing or for people who lose their sight," Marco Gregnanin, developer of the software, says.

Gregnanin's company is relatively new, started less than eight years ago in Italy. At first they focused on weather forecasting for the military, and then intelligence services, and then product development, which led to the invention of the siRecognizer.

"A friend encouraged me to develop it," Gregnanin said of the original idea, which was meant for students. "You have to imagine you go to university and you have a book or questionnaire, you can take a picture and print it... It has Wi-Fi, Bluetooth, HSDPA."

And that's not all, the device also has a video enlarging software to zoom in on things, a camera mount for people with mobility problems and the ability to read and write bar codes. These bar codes may be created with all sorts of fields of information which can be read back in seconds from any labelled product.

"The bar code allows you to put labels to things you've created, such as CDs, and the bar code will store information with a voice message on it. The new system can scan a book very quickly too, about two pages every three seconds," Gregnanin says.

Real potential

All this adds up to a great variety of new and improved technology not only for those with visual impairments, but technology that can make life easier for people from all walks of life. But at the heart of the matter is the fact that when some of these inventions come down in price — some being prohibitively expensive without any form of accepted coverage plan — assistive technologies will allow people to live the lives that they want to live.

"This type of technology that can help people with vision loss and other challenges — we want to ensure that people are aware of the devices and the technology and understand their own condition and can live free and independently," Lachowich said.

And indeed, the field of assistive technology can only grow and expand to a point where those with perception challenges can experience the world more comfortably and safely than ever before — through digital media and inventions like Gregnanin's.

"Clients get used to what's covered by the assisted devices program, and they cover a number of products. There's a whole realm of products that they can purchase without (assisted) funding or purchase with special exception. There's so much more out there."

By Dorian Nicholson

OneNote to Rule Them All

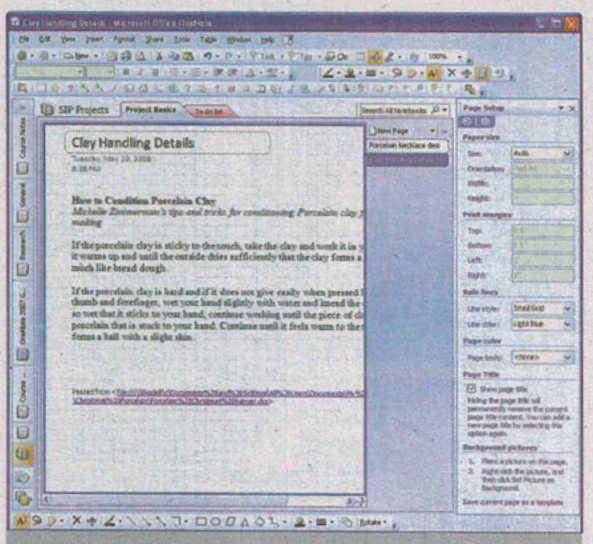
Get up and running with this handy office tool.

When Microsoft OneNote debuted a few years ago it was heralded as an indication of what Microsoft could do when everything went right. OneNote was then (and still is) a landmark tool for taking notes and for doing everything from organizing project information to helping to brainstorm new ideas. What is most exciting about OneNote is its unstructured approach to note taking — you can use it just as you would a lined note pad, writing a bit here and a bit there, doodling as you work and perhaps even penciling a shopping list in the margin.

When you launch OneNote you are taken automatically into your new notebook which is where you store all your information. Everything is saved automatically for you so you can just focus on your work and not on the administrative tasks like saving. If you are working on a Tablet PC you can draw and write in the OneNote screen using your stylus. On the PC you can type into a notebook and draw using a stylus and tablet or with your mouse.

A new notebook has a number of different tabs across the top with names already in place. You can change these by double-clicking the tab and renaming them. Some tabs have information about how to use OneNote or what you might put in that particular tab but essentially you can do what you like with them. To remove existing content, click on the text on the page and the box that contains it will be highlighted, then press the backspace key to remove it.

At the top of each page is the title area and you can type your own title into this. The title then becomes the page name which appears on the right of the notebook. To add content to your page, click where you want the content to appear and start typing. A small box appears on the screen to contain what you're typing. To create another set of notes, click elsewhere and start typing. Each set of notes is kept independent of each other and each can be moved around the screen and reorganized as desired. You can apply formatting to text in a box by selecting the text and then choose the formatting option to use, such as a list.



The page setup options let you configure pages with lines and grids as desired.

When you need a new page to work on click the New Page button on the top right of the notepad to add a new page in the current tab. To add a new section to the notebook, right-click a section tab and choose New Section. You can also add new template pages which include some of the formatting for a particular task. To do this, choose File > New > Page from Template, and browse the template list for the template you want to use. If you prefer to add a new blank page, you can format it by right-clicking the page marker on the right side of the notebook and choosing Page Setup. Here you can size the page and even add lines or a grid.

Draw your notes

You can draw or handwrite in a notebook page, although this is easier if you have a Tablet PC or a tablet. To do this, click the Pen tool and start drawing on the screen. The indicator to the right of the Pen tool opens a list of different pens you can use — these vary in thickness and some operate like highlighters so you can draw over text to highlight it. When you are done, click the Pen tool again to turn it off. You can erase lines by selecting the Stroke Eraser and erase over the element to remove.

When you draw using the tablet or the mouse you may find that graphics tend to split into pieces when you attempt to move them. To avoid this happening, use a tool such as the Lasso Select tool to select the entire graphic and choose Tools > Treat Selected Ink As > Drawing. This turns the ink image into a drawing so that all the elements in it will move together. Avoid doing this to handwriting as you want handwriting to be recognized as such so it can be indexed and made searchable.

Audio notes

If your computer has a microphone, you can record audio into a notebook page. To do this, display the Audio and Video toolbar if it is not visible by choosing View > Audio and Video Toolbar. Click where you want the audio file to appear on the page and click the Record Audio Only button. When you do this the program begins recording and will continue to do so until you click the Stop button. You can include multiple audio recordings in a single notebook page if you wish.

If a page includes an audio recording you can play it at any time by clicking the audio content icon and from the Audio and Video Recording toolbar, clicking the Play button.

Make it a central resource

You can insert documents or files into notebooks so that you keep all relevant information relating to a project in one place. To insert a file, choose Insert > Files as Printouts and then select the file to insert into the document. This inserts a printed version of the file into a notebook page so it can be read from inside the OneNote page.

To insert an image into a notebook page, choose Insert > Pictures > From Files and then select the image to add. You can also send a web page to your notebook from Internet Explorer by viewing the page and choose Tools > Send to OneNote. Where the page appears will be determined by the settings in the Tools > Options > Send to OneNote dialog.

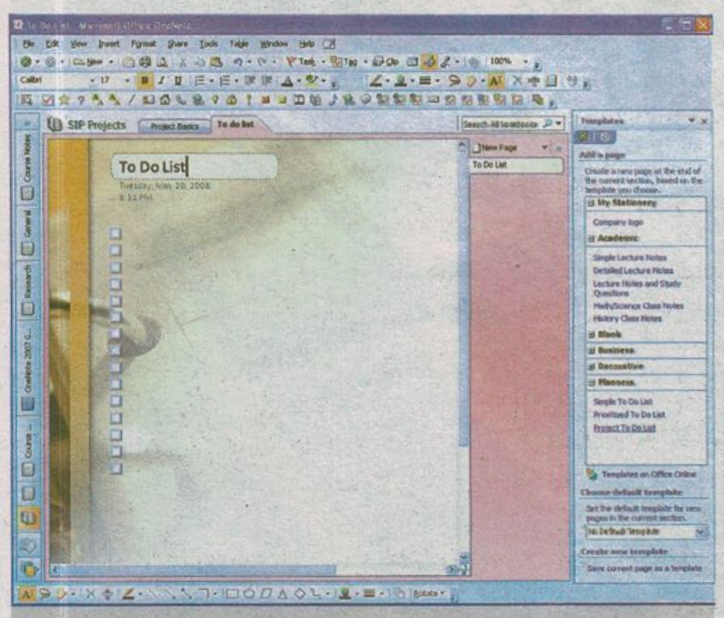
Finding information

You can search this notebook and other notebooks that you create using the Search All Notebooks button in the top right of the screen. You can also limit the search to the current notebook or a section or group in it. This feature helps you find information quickly — the search results are all hyperlinked to the original location of that data so you can click a result entry to view the original data.

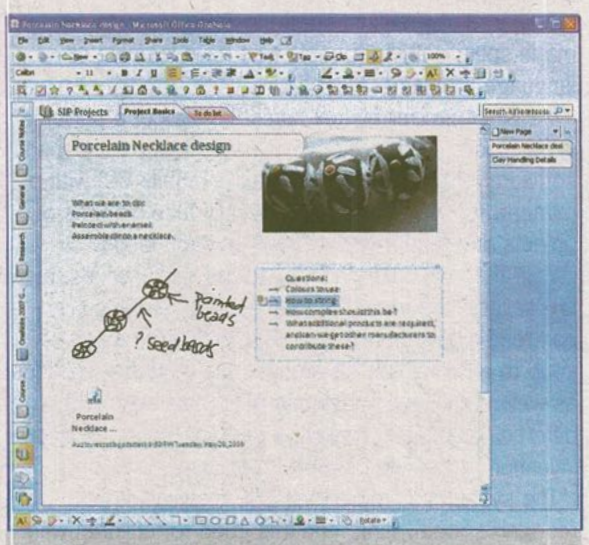
OneNote is handy for not only note taking but also for developing projects, as it lets you approach and document the project from a number of different directions while providing you with good search tools for finding the information you need when you need it.

If you don't yet have OneNote, you can download and install a 60-day trial version from http://tinyurl.com/5pdpaa.

By Helen Bradley



You can create new pages based on templates to shorten the process of setting up typical tasks.



Drawing and handwriting modes are available, allowing you to get creative with OneNote.

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3.16GHz Intel Core 2 Duo Desktop Processor E8500
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$70 www.thermaltake.com

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KVR1066D3N7K2/2G
$170 www.valueram.com

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ASUS EN9800GTX x2
$350 x 2 www.nvidia.com

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Logitech G51 Surround Sound Speaker System
$200 www.logitech.com

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LG L246WH-BH
$500 www.lge.ca

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Thermaltake ToughPower 1000-Watt
$365 www.thermaltake.com

Keyboard
Microsoft Reclusa
$75 www.microsoft.com/hardware/gaming

Mouse
Microsoft SideWinder
$80 www.microsoft.com/hardware/gaming

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Microsoft Windows Vista Ultimate
$330 www.microsoft.com/windowsvista

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Gears of War
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Communications Unlimited

Hardware for VoIP and beyond

One of the benefits of using the Internet for phone service is that you are no longer tied to a traditional telephone handset. With VoIP, you can make calls through headphones, wireless headsets, USB flash drives — even keypads and mice. If you want to retain the look and feel of a traditional phone, you can also pick up a phone adapter or one of the new dual-mode cordless handsets. Here's a roundup of some of the hardware options out there.

USB flash drives for VoIP on-the-go

SanDisk Cruzer Micro
~$70 for 8GB
www.sandisk.com
Compatible with: Skype
Operating system: Windows
SanDisk's Cruzer Micro and Cruzer Titanium USB flash drives come with U3 Smart technology built-in. This means that in addition to storing files, you can also store applications and run them directly off the flash drive without needing to install them on the PC you are using. Skype is one of the applications included free with the drives, allowing you to make and receive your calls on any PC that you plug the flash drive into. Pull the flash drive out of the USB port and take your Skype account with you. It's a nice option for those who use multiple PCs and can't (or prefer not to) install Skype software on each one. If you don't want your calls broadcast out loud through your PC's speakers, you'll need to purchase a headset separately.

Vonage V-Phone
~$30
www.vonage.ca
Compatible with: Vonage
Operating system: Windows
Vonage's V-Phone is a USB flash drive with built-in Vonage software. Plug it into any PC's USB port to make and receive your calls. Each V-Phone works with one specific Vonage line. So if you already have a Vonage line and are interested in getting a V-Phone, you will have to sign up for a second Vonage line with its own unique number. You can also use the V-Phone as a flash drive to store files, although it only comes in one 256MB size (250MB is available for storage). Like the SanDisk Cruzer, the V-Phone is handy for frequent travelers and multiple PC use. It comes with a keychain ring so you can literally carry your phone with you everywhere you go. The stereo earpiece microphone plugs into a jack built into the side of the V-Phone, and is included in the box.

Logitech Cordless Skype Phone

Compact two-in-one USB devices

Targus USB Notebook Mouse Internet Phone AMV01CA
~$40
www.targus.com/ca
Compatible with: MSN, Yahoo, Google, Skype, Vonage
Operating system: Windows
Limit desktop clutter with a mouse that doubles as an Internet phone. This compact mouse features a built-in microphone, speakerphone and headphone jack. It has three buttons, a scroll wheel and a call answer/end button. The device operates well as a loud speakerphone, or even as an external speaker for your PC. It plugs into your computer via a USB cable that also powers the device.

Targus USB Internet Phone with Keypad AKP04CA
~$50
www.targus.com/ca
Compatible with: Skype, Vonage
Operating system: Windows
Another two-in-one option from Targus is the Internet phone/keypad, handy for laptop owners who miss using a full-sized keyboard. Lying flat on your desk, the device operates very well as a numbered keypad with nice proportions and sturdy buttons that give a satisfying click. Numbers begin in the bottom left corner and increase upwards as on a keyboard number pad as opposed to descending from top left, as with a phone keypad. Basic calculation buttons (plus, minus, multiply, divide), tab, pound, star, number lock and backspace are included. A speaker, microphone and volume control buttons are built into the underside of the device underneath the flip stand, which means you hold the keypad up to your ear during calls. The flip stand is designed to let the device stand upright for speakerphone calls, but with a USB cable also running out from the bottom of the stand, it easily tips over. Keep it flat on your desk and you'll be happy. Call answer and end buttons are located on the left and right sides, respectively.

VoIP calls using your existing home phone without a computer

Vonage D-link VTA phone adapter
Free with new service
www.vonage.ca
Compatible with: Vonage
Operating system: PC-Free
If you want to continue using your existing home phone to make your Internet calls and already own a high-speed router, this phone adapter from Vonage is all you need to get started. Simply plug the adapter into your router (or modem) and plug your phone into the adapter. The device comes with two telephone jacks, so you can also plug in a fax machine. It will connect up to two Vonage lines. The compact size makes it easy to pack up and take with you on trips.

Vonage Motorola VT2142 phone adapter with router
Free with new service
www.vonage.ca
Compatible with: Vonage
Operating system: PC-free
Alternately, if you want to use your existing home phone for Vonage calls but don't own a high-speed router, this phone adapter comes with a router built in. The VT2142 has two telephone jacks and one Ethernet port for connecting one computer or other network hardware. The Motorola VT2442 is also available from Vonage, which includes two telephone jacks and four Ethernet ports. Both devices will connect up to two Vonage lines.

Vonage Motorola VT2542 wireless adapter
~$80
www.vonage.ca
Compatible with: Vonage
Operating system: PC-free
This all-in-one device acts as an Internet phone adapter, high-speed Internet modem and wireless router. You not only continue to use your traditional phone for your Vonage calls, but also get your high-speed Internet signal broadcast wirelessly throughout your home. The device has two phone jacks, four Ethernet ports for direct PC connection, supports two Vonage lines and operates on 802.11b/g networks. It also features voice-over-data prioritization, which means you can continue to talk on the phone while downloading files and browsing the Internet

without affecting the quality of your call. D-Link's VWR phone adapter with wireless router is also available from Vonage and offers similar functionality.

Cordless VoIP phones

Logitech Cordless Skype Phone
~$90
www.logitech.com
Compatible with: Skype
Operating system: Windows
Plug the wireless receiver into your PC's USB port to make and receive Skype calls within a 150-foot range of your computer on a cordless handset. A colour LCD displays contact lists, caller ID, voicemail, call history, the time and battery strength. Features offered are similar to those you'd find in a cell phone: four ringtones, incoming and outgoing call logs, an alarm, clock, timer and stopwatch. There's also a built-in speakerphone. The phone has a silver faceplate and steel-grey casing.

Vonage VTech IP8100-1
~$70 with new service
www.vonage.ca
Compatible with: Vonage
Operating system: PC-free
This 5.8GHz cordless broadband phone comes with a base unit that plugs into your high-speed modem or router. The phone itself rests in a power cradle, which can be placed anywhere in your home. It will operate one Vonage line.

Cordless dual-mode phones handle Internet and landline calls

Netgear SPH200D dual-mode cordless phone with Skype
~$110
www.netgear.com
Compatible with: Skype
Operating system: PC-free
You don't even need a computer at home for this Internet phone to work. With Skype software built-in, you just plug the base unit into your high-speed Internet modem or router via the included Ethernet cable to make and receive VoIP calls. A telephone jack allows you to also connect the base unit to a standard PSTN line wall for traditional landline calls. To make calls, you simply dial the number on the cordless handset and the display will ask whether you are making the call via your landline or Skype. You can also set the phone to automatically default all outgoing calls to one service.

Panasonic BB-GT1500B Globarange expandable cordless phone with VoIP
~$70
www.panasonic.ca
Compatible with: other Globarange phones and joip
Operating system: PC-free
Purchase a Globarange phone from Panasonic and get three years of unlimited calling to all other Globarange phones worldwide. To make Internet calls to landlines and cell phones, however, you need to sign up for a monthly plan from joip. This hybrid phone also operates as a traditional 5.8GHz cordless phone for all your landline calls.

Philips VOIP841 Cordless Phone for Skype
~$130
www.consumer.philips.com
Compatible with: Skype
Operating system: PC-free
With an elegant design and glossy black finish, this is one of the most attractive VoIP phones on the market. Dual-mode capability means there's a jack for your standard PSTN line and an Ethernet port to connect to your modem or router. The phone comes with Skype built-in, meaning a computer is not necessary for set-up or operation. It features a colour display for Skype-based options such as viewing your credit balance, looking up another Skype user and changing your Skype status. This DECT 6.0 phone also includes a built-in speakerphone for hands free calls. A lower-priced model, the VoIP321 is also available from Philips, but does not offer speakerphone capability.

By Jennifer Kavur

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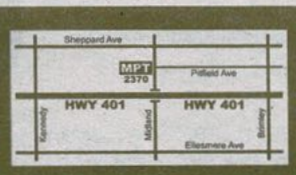
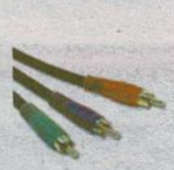


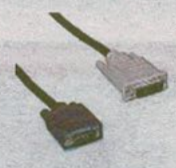
128 CD / DVD wallet with carry handle
$9

400 CD / DVD wallet with dual binder
$19

200 CD / DVD case with index & lock
$19

510 CD / DVD case with index & lock
$29


Component to Component
Component to VGA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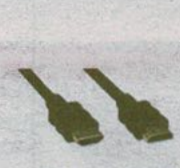
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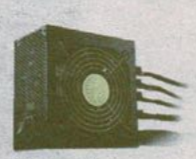
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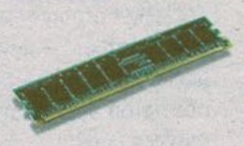
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Power Pellets: Goodbye Peanuts, Hello Penny Arcade

Web comics give an old art a new edge

Top: Dell XPS 730 H2C
Bottom: A look inside the Dell XPS 730 H2C

In the world of webcomics, game-themed strips are turning their creators into mini cartoon moguls, but they still get no respect from Old Media.

Comic strips have been the stuff of newspapers for well over a century. However, much like the pulpy pages that contain them, this tried and true art form is in the midst of migrating to an online format. And, as they stake out their residences on the web, plenty of new comics that never would never have seen the light of day in the world of Old Media have flourished — especially those devoted to video games.

Ten-year-old Penny Arcade (www.penny-arcade.com) is one of the most successful webcomics in the world. It's a sharp and insightful lampooning of both games and the game industry starring a pair of affable doofuses named Gabe and Tycho. They unabashedly poke fun at bad games, wittily call out quacks and hypocrites in and around the gaming world, and try to make sense of gaming culture and counter-culture.

Penny Arcade has made writer Jerry Holkins and artist Mike Krahulik millionaires through advertising and merchandising. They have their own charity (Child's Play), their own geeky conference (Penny Arcade Expo), and have even managed to create their own role-playing adventure game, the amusingly monikered Penny Arcade Adventures: Episode One — On the Rain-Slick Precipice of Darkness, released in May for Windows and Xbox Live Arcade.

But there is a lot more to game-themed webcomics than just Penny Arcade. Ctrl+Alt+Del (www.ctrlaltdel-online.com), which has proven successful enough to become a very profitable career for creator Tim Buckley, has been running four high-quality comic strips weekly since 2002.

It began as the simple shenanigans of a couple of game geeks named Ethan and Lucas, but has evolved over the years into a sophisticated comic with longer, more serious story arcs. At press time, Ethan, a game store clerk, and Lucas, a programmer, were dealing with the sobering subjects of fatherhood and childbirth complications.

Buckley's site attracts hundreds of thousands of visitors and has been collected into several volumes in print format.

Other game-themed webcomics forego the sincerity of Ctrl-Alt-Del and the prickly social commentary of Penny Arcade in favour of unadulterated satire. And many of these pure-humour cartoons actually use graphics from the games they spoof. Like Brian Clevinger's 8-Bit Theatre (www.nuklearpower.com), which debuted in 2001 and features simple sprite characters from the first Final Fantasy game portrayed as endearing buffoons with names like Fighter and Thief.

Over the course of 8-Bit Theatre's 1,000-plus strips, the story has done little more than show the game's 400-pixel protagonists involved in one misadventure after another — getting shot out of cannons, accidentally mass-murdering castles full of people, peeing on ants — with no other aim than to make readers laugh.

And these three strips compose just a handful of the more successful gaming comics online. TheWebComicsList.com has a roster of thousands of

video-game themed strips, ranging from VG Cats (www.vgcats.com), which places kittens in the roles of famous video game characters, to Little Gamers (www.little-gamers.com), in which toddler gamers engage in decidedly adult discussions about their hobby.

The fact that none of these comics have found their way into mainstream newspapers alongside Peanuts and Family Circus is perhaps surprising. The enormous critical and commercial success of strips like Penny Arcade and Ctrl+Alt+Del proves that they have enormous audiences. Indeed, their humour is often so universal that just about anyone who has ever played a game (which, these days, is just about everyone) would curl a lip at most of their jokes. In fact, you don't have to be a gamer to laugh at Penny Arcade's gag about a game meant to help people stop smoking that comes with a carton of cigarettes.

Yet editors have reliably dammed off the flood of webcomics, game-themed or otherwise, that has risen since the late '90s, diverting it online, where able artists have the freedom to purvey their humorous wares without going through any grey-haired, grey-suited gates.

And, in the end, does it really matter if they make it to print? The continuing collapse of newspapers all but dooms B.C. and its comic brethren to extinction, while gaming webcomics are proving that they have a very bright future online.

Dell XPS 730 H2C

Laptops may be all the rage these days, but serious gamers pooh-pooh portable PCs in favour of meatier machines that live near desks and often weigh more than your average six-year-old child. Like Dell's new 22-kilo, XPS 730 H2C, which starts at $5,999 and, according to a Dell press release, "can play Crysis at full 1920-by-1200 resolution and 30-plus frames per second."

That'd be a first. And something any hardcore PC gamer would want to see. Which is why we asked if we could check out one of these monster rigs for ourselves.

The tower we were sent had dual 768MB NVIDIA GeForce 8800 Ultra graphics cards working together in scalable link interface (SLI), which alone was quite enough to pique our geeky curiosity. But it also boasted a quad-core processor in the form of Intel's 3.0GHz Core 2 Extreme QX9650 with 12 MB cache, along with 4GB of overclocked Corsair Dominator DDR3 SDRAM running at 1333 MHz and two terabytes (!) of hard disk storage spinning at 7,200 RPM.

To top it all off, it has Dell's H2C liquid cooling system, which accounts for at least $1,000 of the machine's hefty price tag and is supposed to let the box run whisper-silent. However, an enormous fan made our unit sound rather like a freight train. When we quizzed a Dell rep on the noise and asked whether we could switch off the fan we were informed that we had a pre-production model. "Our production units should be significantly quieter," read the email we received. "Please do not turn off the fan."

Fair enough. However, if this monster (and monstrously loud) fan is the one that ships with non-H2C units, those pricey, liquid-chilled cooling pipes suddenly seem less like a luxury and more like a mandatory investment for anyone who wants to actually hear the games they play.

But enough about noise. The big question, obviously, is this: How well does the XPS 730 H2C play Crysis, the most notorious, hardware-humiliating PC game on the planet?

Pretty well. We weren't able to coax out a very playable game at full 1920-by-1200 resolution running on the highest graphics settings, but bumping the game's optional eye candy down a notch enabled stutter-free, high-resolution play. Conversely, taking the resolution down a tad and cranking up all the visual settings to very high made for a similarly gorgeous gaming experience.

Put plainly, Dell's new rig plays games good. Now your job is to figure out if you can justify the extra cash required for the privilege of being able to slide your games' video settings all the way to the right.

By Chad Sapieha

Graphics Card Redux: GeForce 9

Bleeding edge performance can come at a price

During February, March and April nVidia launched its GeForce 9 series graphics hardware with surprisingly little fanfare. Now, a couple of months later, all three of the GF9 series cards are readily available. On the surface the G9x GPUs seem to have only received traditional upgrades like clockspeed increases, but the performance differences and pricing structure make a closer inspection worthwhile. Gigabyte technology has been nice enough to supply us with their ultra-end 9800 GX2 and one of their mid-range 9600 GT based cards for testing. After some benchmarking (and a substantial amount of gaming) the most obvious conclusion that can be drawn about these cards is that they offer heaps of performance for their respective price range.

Overview

Model	GV-NX98X1GHI-B	GV-NX96T512H-B
Chipset	NVIDIA GeForce 9800 GX2	NVIDIA GeForce 9600 GT
Stream Processors	256 (2x128)	64
Core Clock	600MHz (x2)	650MHz
Memory Clock	2000MHz (x2)	1625MHz
Memory	1GB (2x512MB)	512MB
Memory Bus	512bit (2x256 bit)	256 bit
Memory Bandwidth	128GB/sec (2x64GB/sec)	57.6GB/sec
Memory Type	GDDR3	GDDR3
Card dimension	ATX	ATX
D-SUB	Y (By Adapter)	Y (By Adapter)
TV-OUT	N	N
DVI Port	Y (DVI-I)	Y (DVI-I)
VIVO	N	N
Multi View	Y	Y

Gigabyte GV-NX96T512H-B

$200 www.giga-byte.com

The 9600 GT has a lot going for it. Of particular interest is that it has a $200 price tag while having enough horsepower to put it teetering on the verge of par with nVidia's 512MB 8800 GT (a card that still costs around $300.) This puts the 9600 GT in an incredibly strong position to quickly become the de facto mid-range graphics card — it's inexpensive enough to be affordable to the masses and fast enough to play the latest games; essentially a win-win combination for the price-conscious buyer.

The Gigabyte GV-NX96T512H-B has everything you'd hope to get from a graphics card powered by the 9600 GT GPU. nVidia's nView Multi-display functionality, DX10 and OpenGL 2.1 support, Dual-Link DVI with HDCP to display up to 2560x1600 resolution, SLI support for additional performance and upgradability, as well as nVidia's PureVideo, GigaThread, and Quantum Effects technology for "the most advanced graphics and physics computation available." In other words, the GV-NX96T512H-B takes advantage of all the bells and whistles the 9600 GT has to offer.

Whereas most budget and mid-range cards are shorthanded in the memory department the GV-NX96T512H-B has 512MB of GDDR3 memory running on 256-bit memory bus, which is definitely a good thing. Using an actively cooled heatsink means the card should run cool and thus increase its overclocking potential. Along with having two DVI ports, the card also has TV-Out via component and S-Video. Unfortunately Gigabyte decided not to include a DVI-to-HDMI converter, but they do pack in a 4-to-6pin power cable, which is arguably more important, as well as two DVI-to-VGA adapters for those still running analog monitors.

Gigabyte GV-NX98X1GHI-B

$600 www.giga-byte.com

Describing the 9800 GX2 is fairly simple; it's essentially two 9800s — nVidia's latest high-end GPU — running in SLI through a single PCIe slot. If you want to take things a step further (and have cash to burn), two GX2s can be linked together using traditional SLI to unleash the power of quad-GPUs working in tandem. Needless to say, the 9800GX2 offers the most performance currently available in a single card solution, but having two high-end graphics cards in one comes with a hefty price tag. The 9800 GX2 hovers $600 and up at retail.

Like the GV-NX96T512H-B, the GV-NX98X2GHI-B comes packed with two DVI-to-VGA for the dual-link DVI ports on the card. Gigabyte was smart enough to include both a 4-to-6pin and a 4-to-8pin power cable adapter, the latter of which is hard to buy separately as it's fairly new. The 9800 GX2 requires both the 6pin and 8pin power cables to be connected during operation and nVidia recommends a minimum PSU of 580 watts.

Aside from this card's massive size (it's like an elongated brick), another distinctive feature of the GV-NX98X1GHI-B is that it comes with a built-in HDMI port. It's great to see nVidia and their manufacturing partners using the digital output, especially since one of the benefits of the GF9 series is its HD video hardware acceleration. As Blu-Ray drives and DRM downloadable content become popular, both the onboard HDMI port and PureVideo HD will pay dividends to 9800 GX2 owners.

Because there are two physically separate GPUs on the card, each 9800 graphics processor on the 9800 GX2 has its own dedicated memory. In the case of the GV-NX98X1GHI-B each GPU has 512MB of GDDR3 for a total of 1GB. Being that the 9800 GX2 is literally two 9800 cards melded together, both memory setups are running on their own independent 256-bit memory bus, maximizing bandwidth.

Benchmarks

The system used for benchmarks was comprised of an Intel Core 2 Quad Q6600 overclocked to 3GHz (running on a 1333MHz bus) with 2x1GB of DDR3 memory. The 64-bit version of Windows Vista was used along with the ForceWare 174.53 drivers for both cards. The latest patches (as of mid-April 2008) for all games were applied after a fresh install of the OS.

	9600 GT	9800 GX2:
Enemy Territory: Quake Wars 1920x1200, High Settings	81.9fps	112.4fps
Call of Duty 41920x1200, High Settings	64.3fps	103.5fps
Crysis 1920x1200, High Settings	18.2fps	41.1fps
3Dmark 2006 Default Settings	10784pts	15493pts.

The 9600 GT, while obviously being crushed by the 9800 GX2, shows it's more than capable of playing games with a decent framerate even at a monstrously high resolution. In fact, given the settings these benchmarks were run at, it would be interesting to see if two 9600 GTs in SLI is competitive with a single 9800 GX2. Judging solely on cost, two 9600 GTs would still be substantially cheaper than a single 9800 GX2, so if they're performance is on par it may be more worthwhile to purchase two 9600 GTs instead of a single 9800 GX2.

Conclusion

Both the 9600 GT and 9800 GX2 are exceptional video cards. From a purely numbers perspective both offer the best performance in their class. And while their graphical features are more evolutionary than revolutionary on paper, there's a certain performance potency that comes with their refinement.

The 9600 GT's ability to play even the latest games with all the DX10 features enabled is impressive to say the least. Graphics cards like the GV-NX96T512H-B will push playable DX10 performance to the mainstream market, raising the bar for their chief competitor AMD/ATI. The best part: it's priced according to its position within nVidia's GPU line-up, rather than its frame-rate (which is substantially higher than other mid-range cards.) The 9600 GT is currently the hottest price to performance GPU available.

With the 9800 GX2 you'll be entering into a completely different realm of graphics hardware. This isn't just a high-end video card (technically it's two of them attached together), it's bordering on the unnecessary. Gigabyte's GV-NX98X1GHI-B is the fastest "single" graphics card I have ever used, but it's also the most expensive (think of it as a Ferrari.) If you want the bleeding edge, the 9800 GX2 is it.

By Mike Palermo

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The Last Byte

The e-book reconsidered

Among the press releases from the Computex trade show held in Taipei in early June was an item entitled "e-Book Showing Strong Growth in 2008." The headline turned out to be somewhat misleading compared to what was in the actual release, which was interesting enough, though depending on what segment of the e-book sector you focus on there is room for optimism, but also disappointment.

As a concept, the e-book and its e-paper building block are easy to grasp and something we'd like to see — books, newspapers and magazines brought into the electronic age in digital form. But how do they stack up to paper?

Paper products are successful content delivery systems for a few reasons. Relatively low entry cost means that most people can afford to buy books and magazines ($150 textbooks notwithstanding). An established distribution system means they are available virtually anywhere. The prerequisite for consumer participation is relatively simple: basic literacy will get you into a relationship with a book. The user interface is uncomplicated and doesn't demand steep learning — if you can flip pages, you can get through the content. On top of that, many book lovers find the book itself to be an esthetically pleasing form — the weight, cover design, paper texture, the artistry of the typography and illustration, even the smell — quite apart from the book's actual content.

The e-book ecology is a different environment altogether. One key difference is the separation of content and content holder. It's hard to think of a book as being separate from the paper it's printed on, but that's one feature that differentiates e-books from paper ones — empty buckets of memory that can be filled and refilled with diverse content. But that's also creating a couple of related obstacles — those dealing with the physical devices that people would use to view e-books, and those dealing with the content.

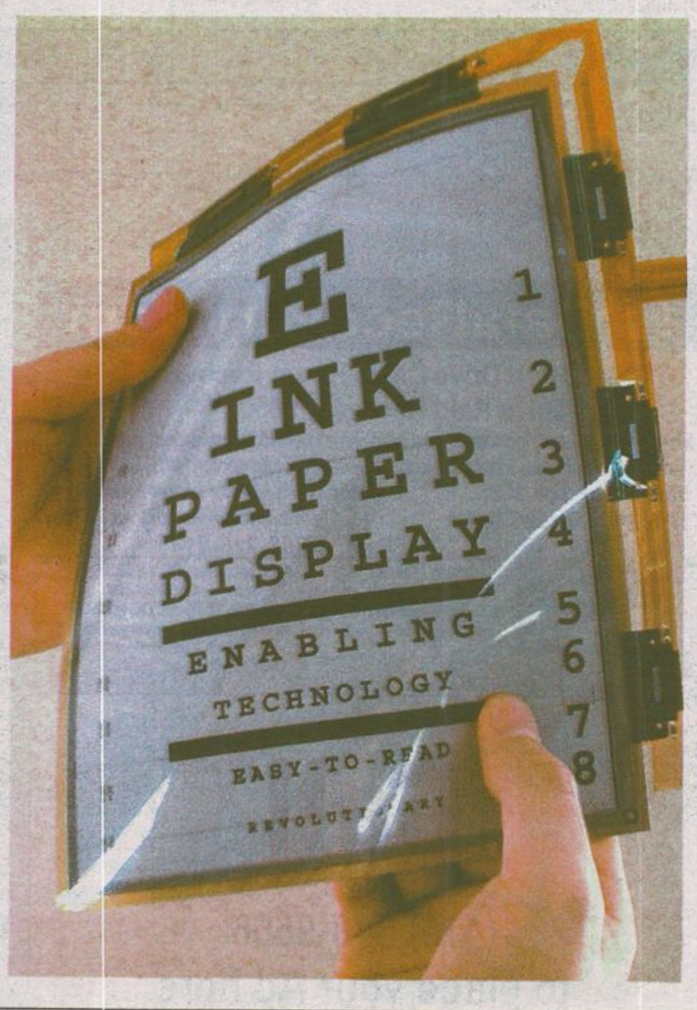
Devices to present e-book content span a range from personal computers to specialized e-book readers styled like books. This is where e-paper comes into play — think of paper-thin high-resolution displays that are flexible enough to roll up or fold. There are a few technologies being used to make e-paper displays, but they share some properties. They are reflective (in contrast to LCD panels, which have to be backlit), and can hold whatever is on the screen (image or text) without having to refresh the pixels. Both of those keep energy requirements for e-paper extremely low compared to something like a notebook computer display. Book readers don't have to be flexible or foldable to mimic the properties of books, but nevertheless the screens used in the current crop of readers, such as Sony's PRS-500 or Amazon.com's Kindle product use monochrome e-paper displays.

Offering a peek at the near future of e-paper is LG Philips LCD (a joint venture between LG and Philips). At a trade show earlier this year it showcased its colour e-paper display, a flexible (TFT on flexible foil) A4 size (14-inch diagonal) high resolution (1280 x 890 pixel) panel that's paper-thin (0.012 inch). This is probably what's in your mind's eye when you think of an electronic newspaper. The hardware hurdles are being picked away at, but content and content delivery face the challenges other media forms face when going digital: where to get quality content, and how to prevent it from being repeatedly copied with no dues going to copyright holders.

One of the interesting statistics noted in the Computex press release — which was a high point in terms of the market — was from a research firm in Japan, which found that between March 2006 and March 2007 the e-book content download market in Japan grew by close to 200 per cent to around 18.2 billion yen or around $175 million, with about 60 per cent of downloads being made to mobile phones. "Mobile phones?" you say. Interesting, since one of the early e-book platform candidates was the PDA, which offered portability, a decent screen and storage capacity. PDAs have largely morphed into smartphones and maybe it's here that e-books will finally gain some legs. Consider the trajectory of advanced smartphone products like the iPhone or Blackberry. The new iPhone is a true 3G device, which offers far better bandwidth than EDGE. RIM's upcoming 9000 series will also be 3G. iPhone already has a browser well optimized for the small screen. It is also an iPod, with all of the iTunes Store infrastructure behind it. If you can buy tunes and movies for your iPhone, why not reading material?

There are interesting parallels as well as contrasts here to Amazon.com's Kindle device, which was launched in the U.S. in the fall of 2007. This e-book reader communicates with the Kindle Store over Amazon Whispernet, which is a cellular-based (Sprint) datacomm network. You can buy books, newspapers and other virtual products. over the network. Amazon says Kindle will hold around 200 books (with no pictorial content) in its onboard memory, but the unit's memory can be expanded via SD cards. The main difference between Kindle and a smartphone is that Amazon has built the cost of data communication into its business model, so that for the customer, there is no separate cellular fee or subscription requirement to use Kindle. Hmm. Doesn't Amazon sell movies and music too?

Until next time,
David Tanaka



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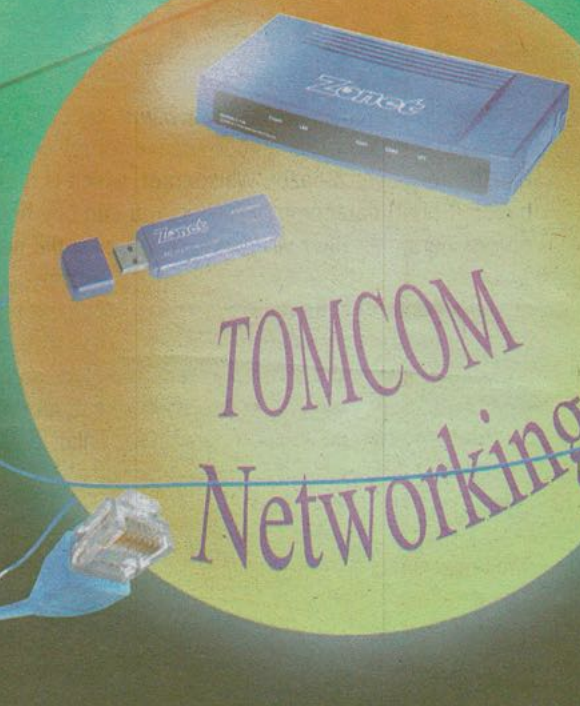

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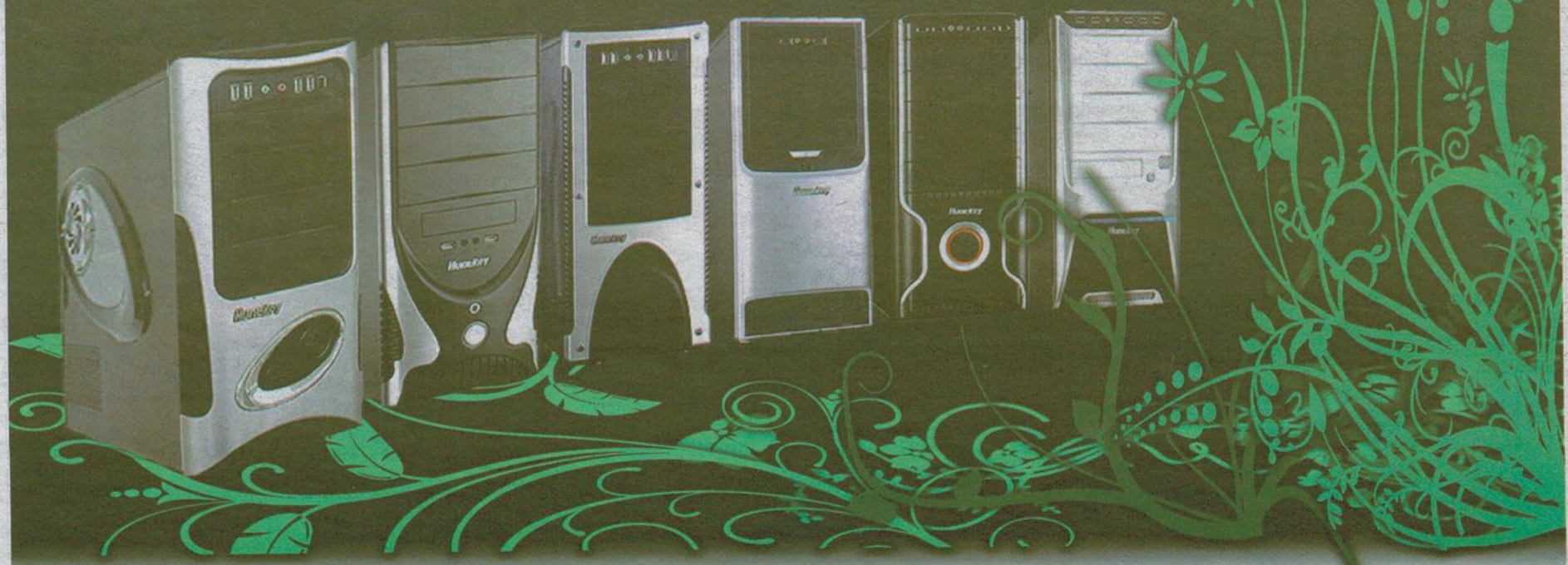

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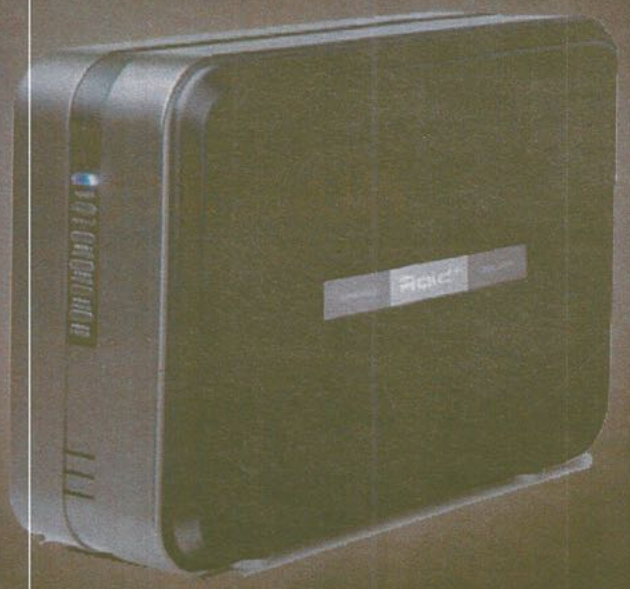

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